

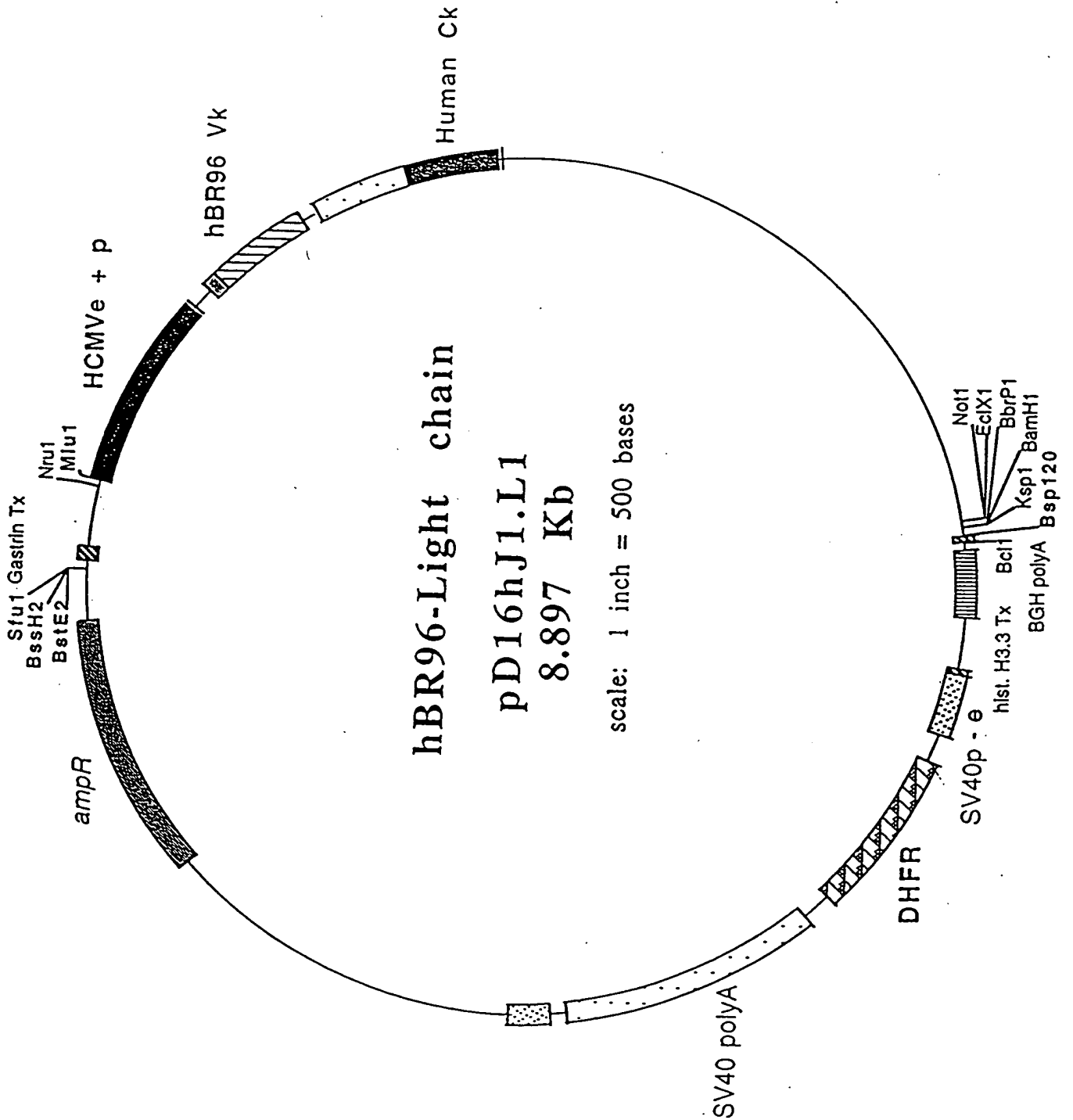
Figure 1. Plasma clearance in high LeY expressing dogs chimeric versus constant region mutant of cBR96-2.

Figure One

Figure 2



Figure 3



264080-66250680

Figure 4

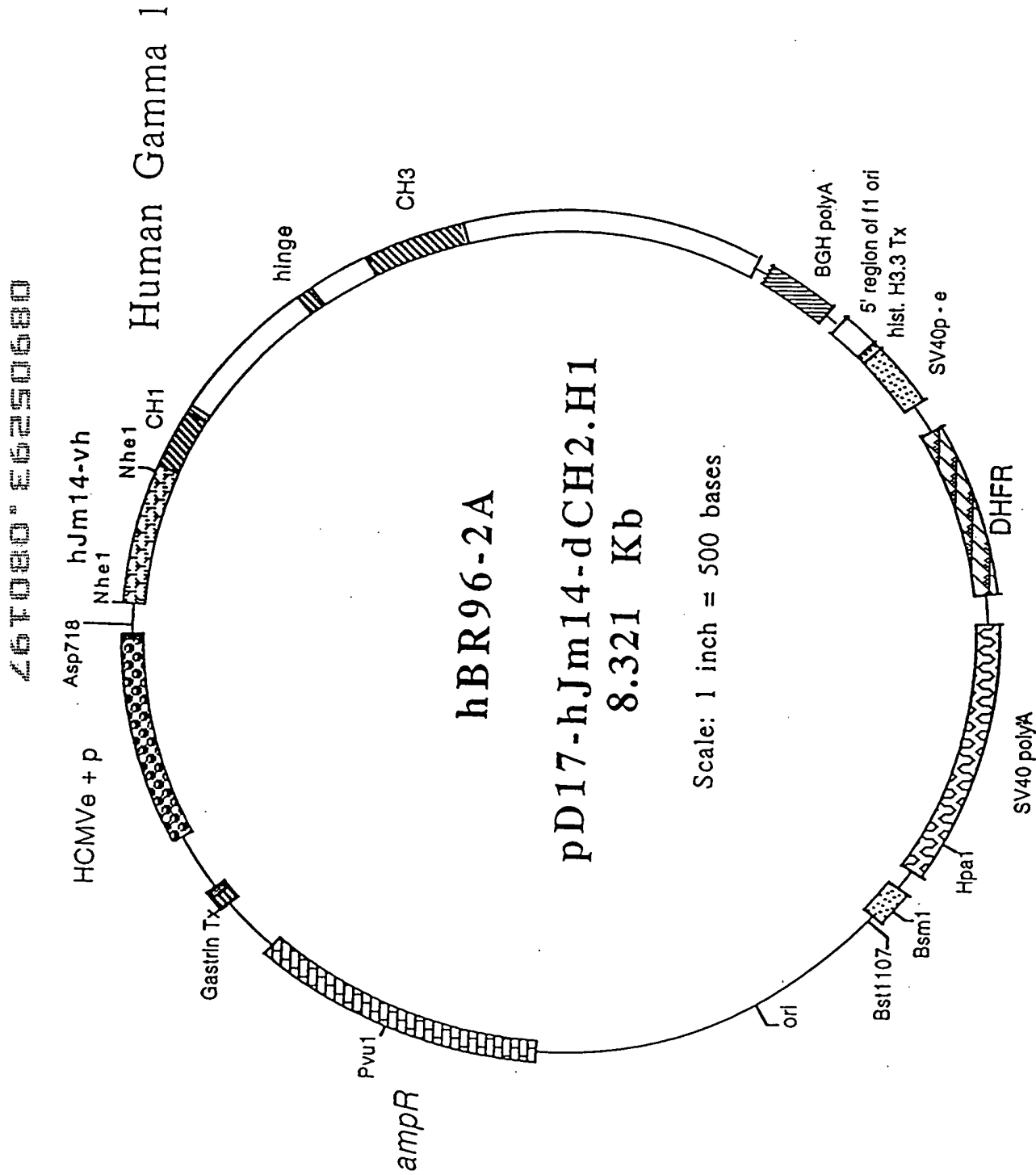


Figure 5.

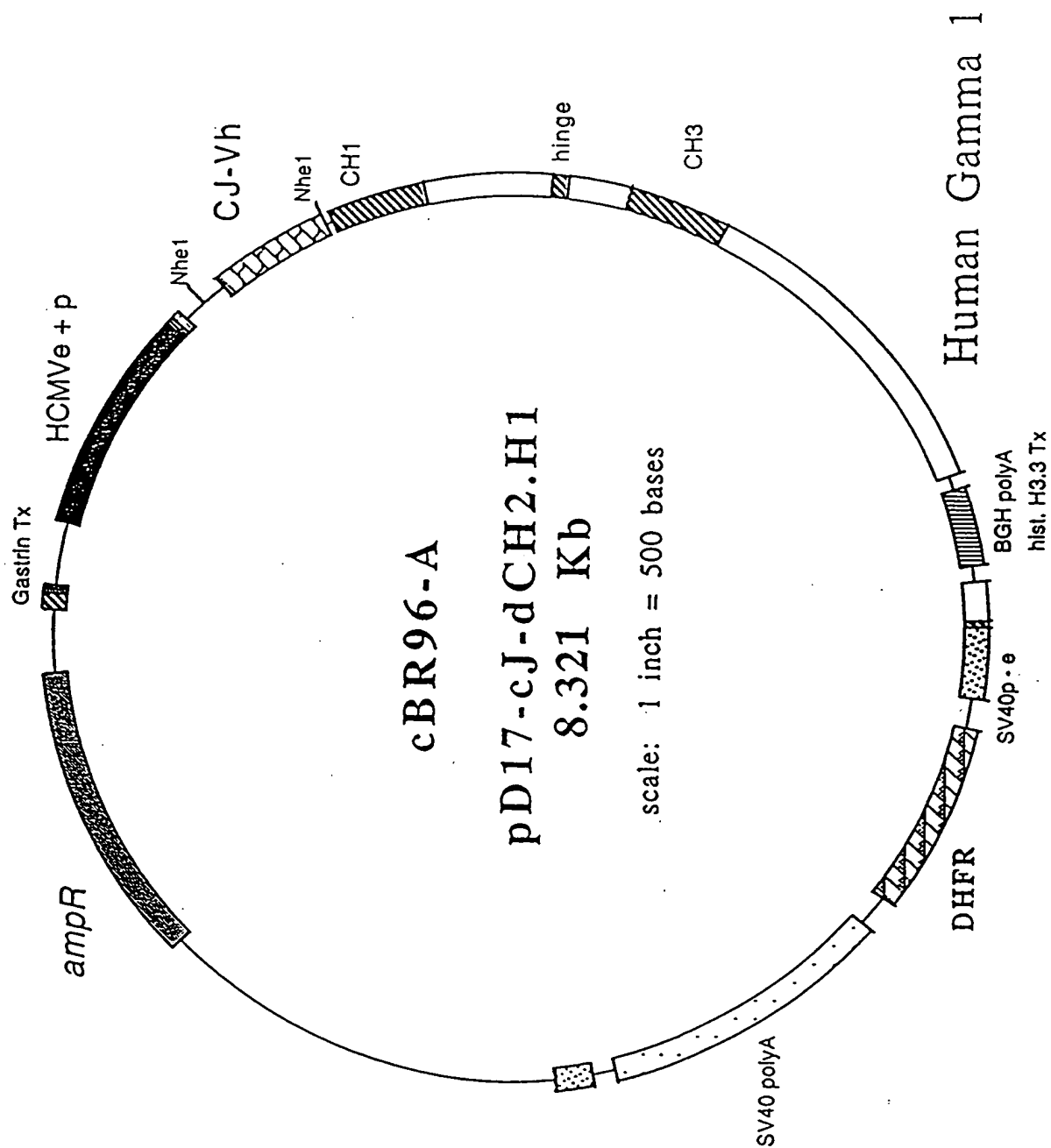


Figure 6

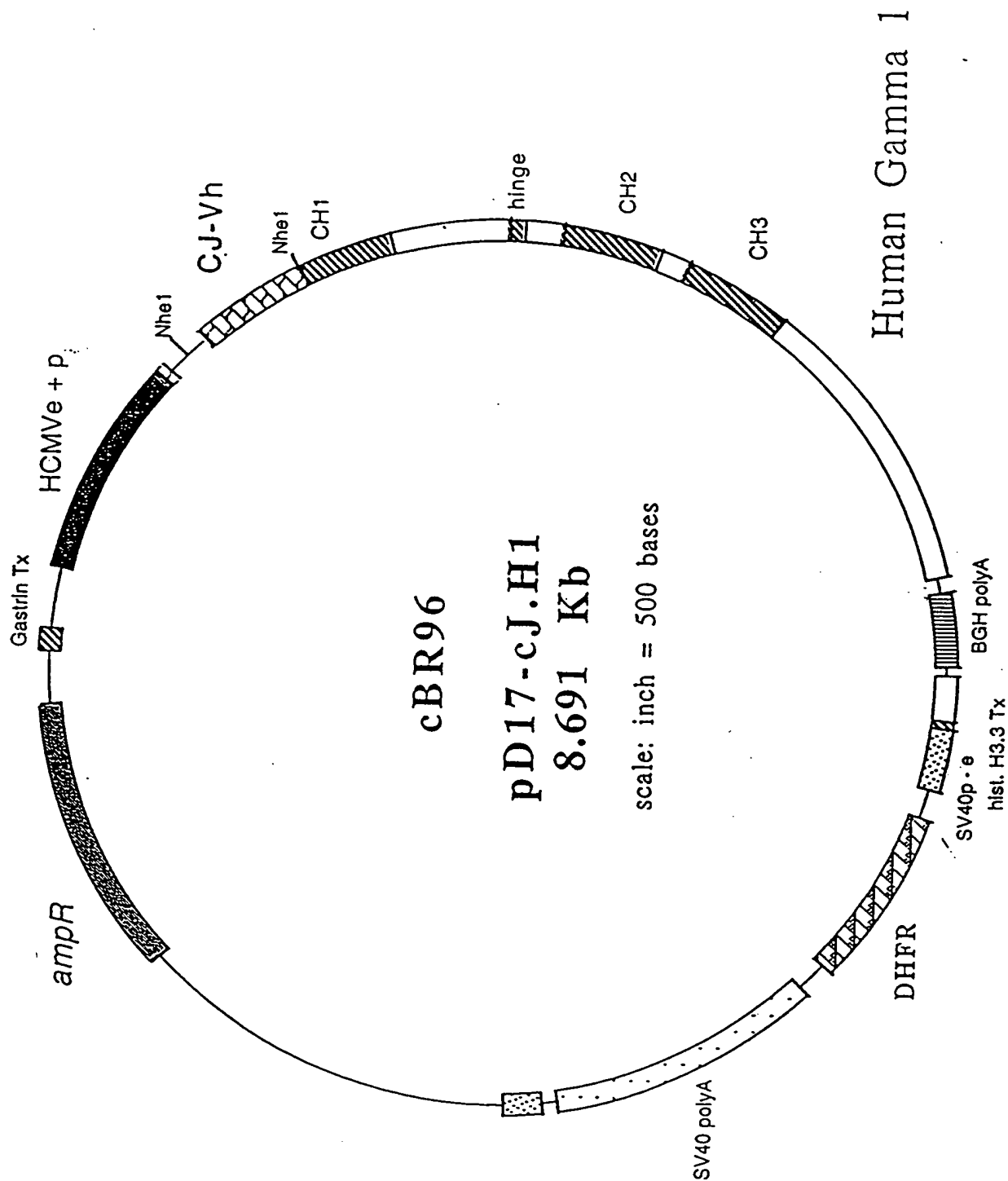


Figure 7

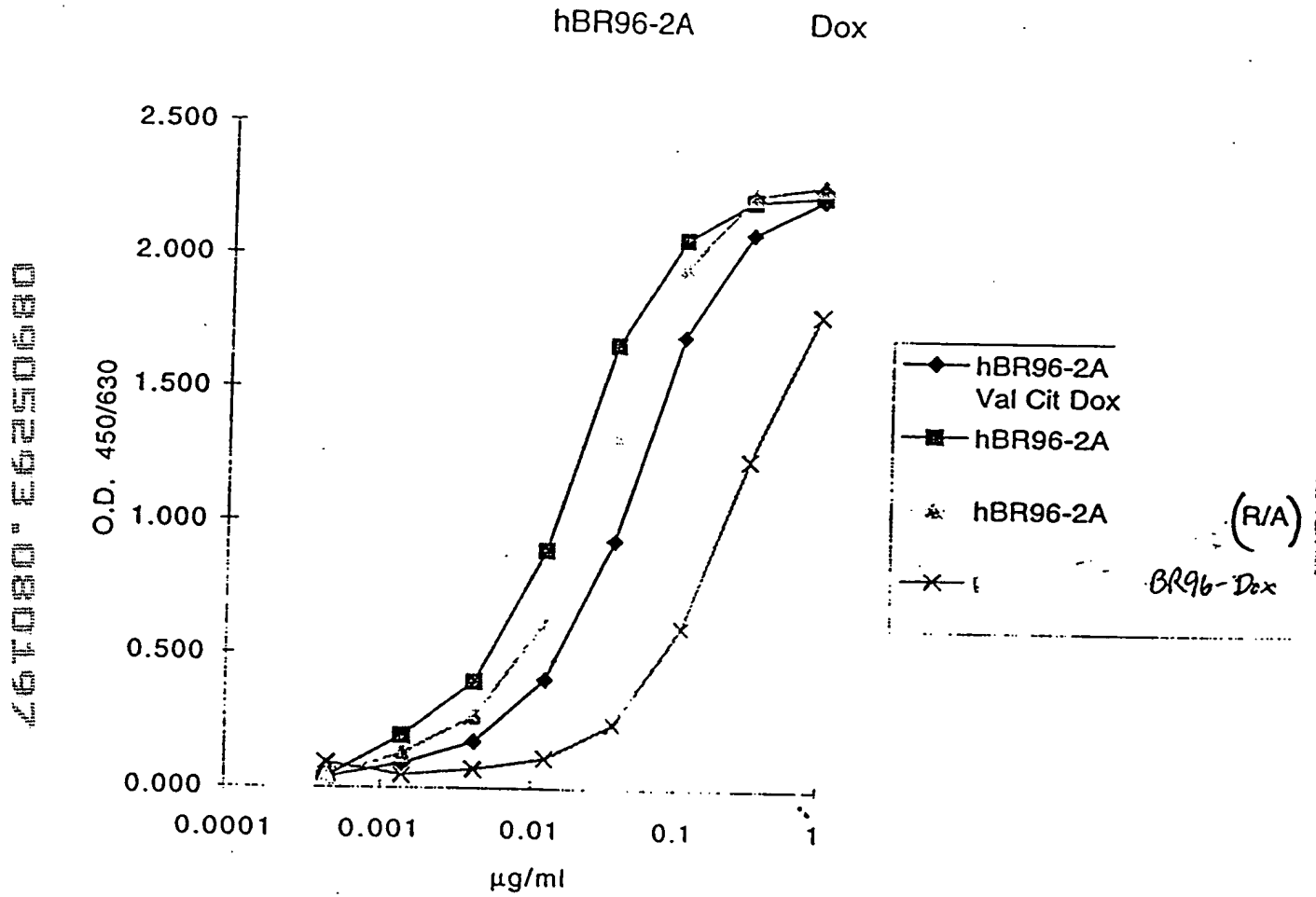
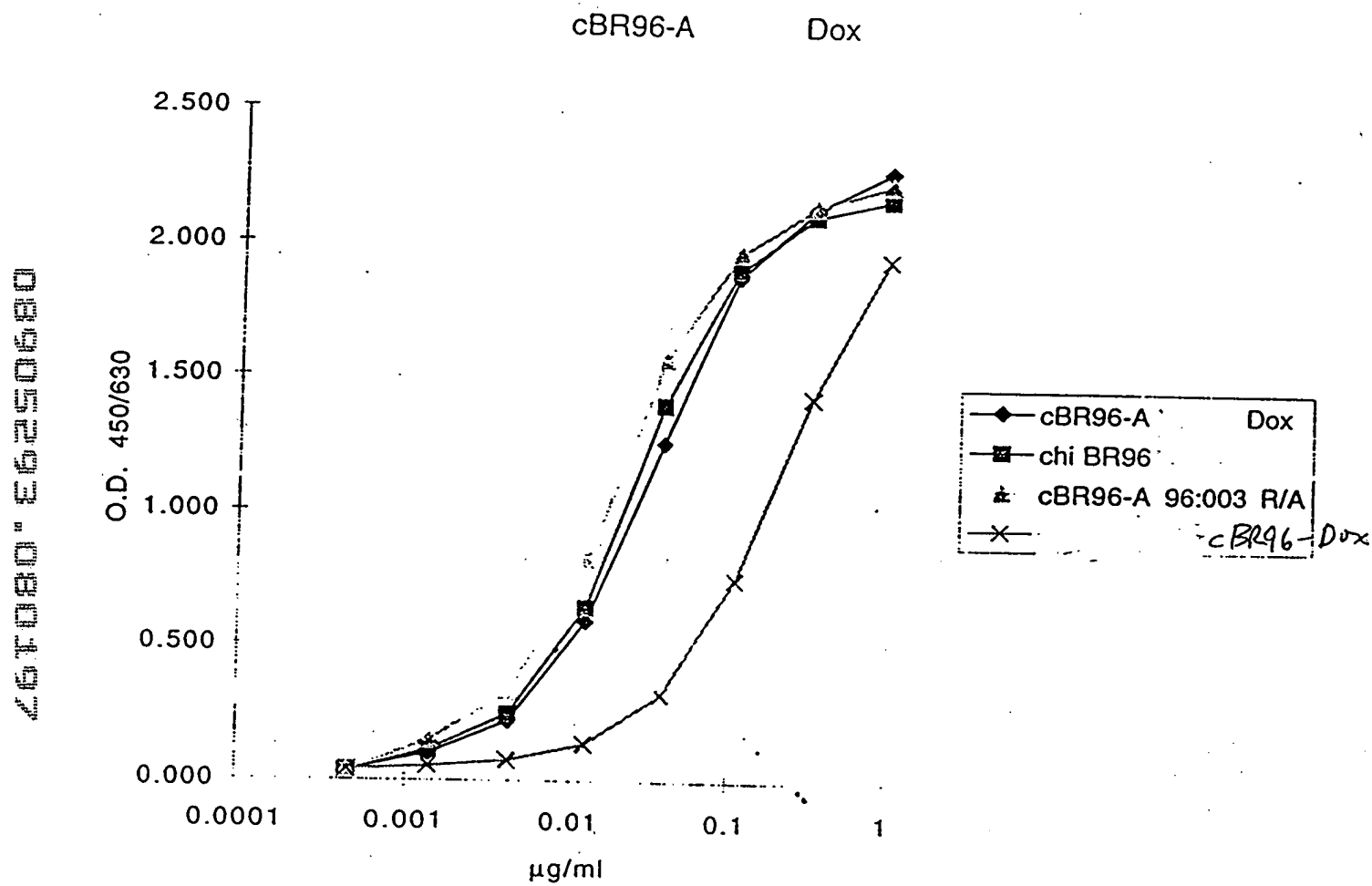
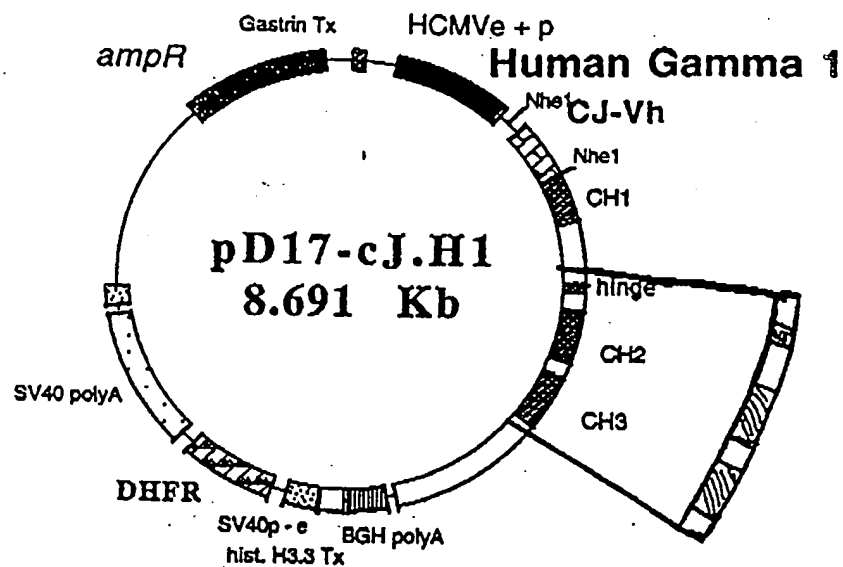


Figure 8



A- Hinge + CH2 + CH3 domains were removed from PR96 IgG1 construct by E. **[REDACTED]** III restriction digestion .



B. 1 - Hinge + CH3 domains amplified by PCR from L6 IgG1 construct lacking the CH2 domain .

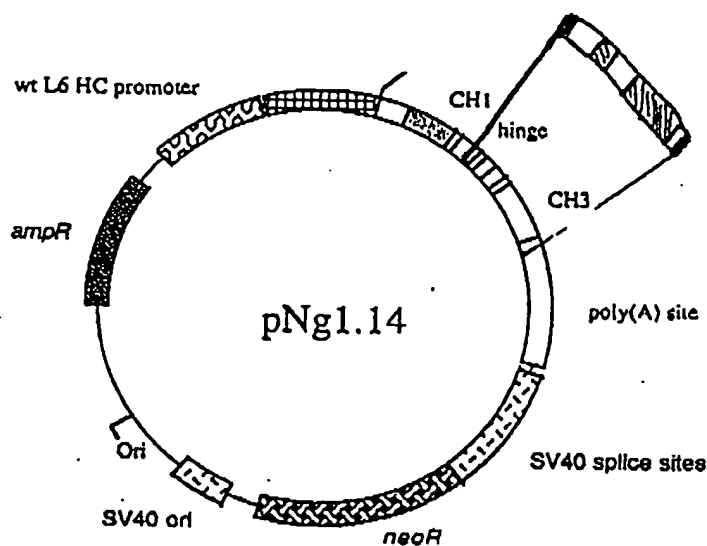


Figure 9

08905293-080197

3 - Hinge +CH3 PCR fragment cloned by homologous recombination into E.co47-III site of BR96 IgG1 molecule.

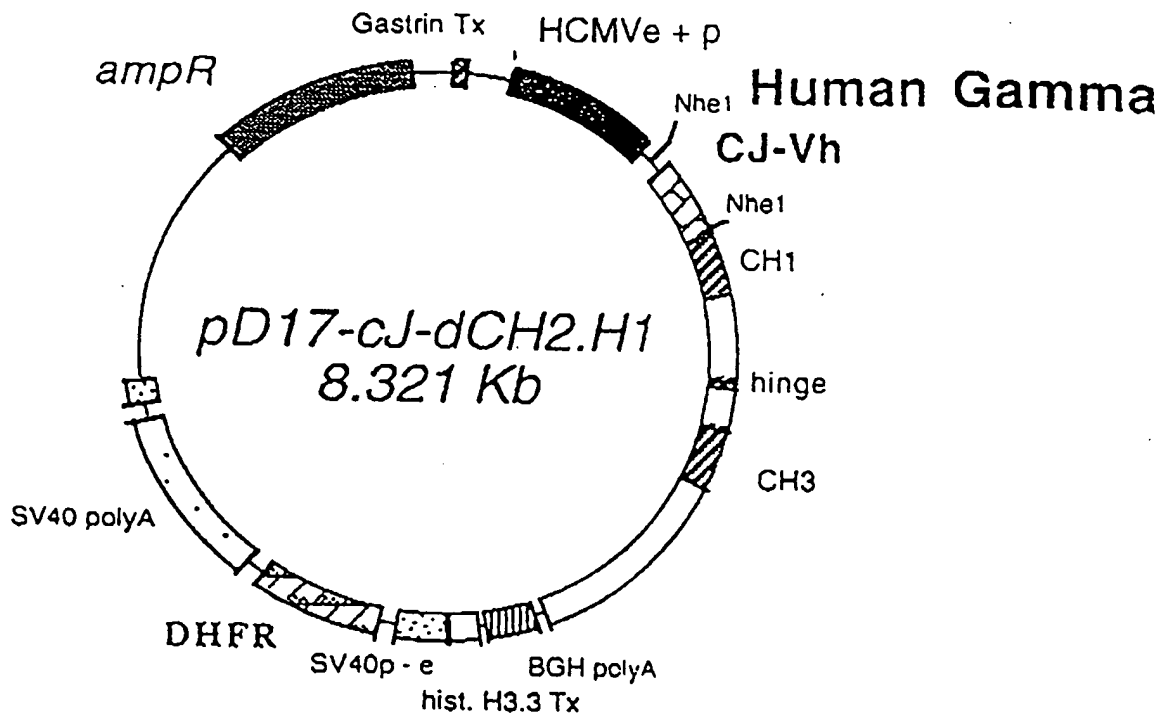


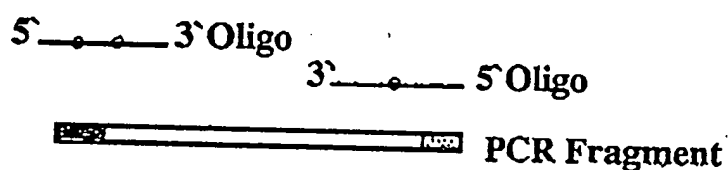
Figure 9

(CONTINUED)

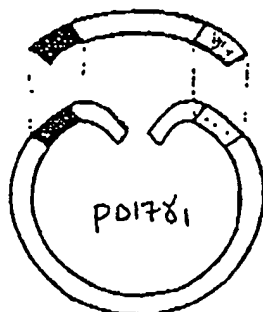
26T080-E6250680

1- Introduction of mutations by site-directed mutagenesis on double-stranded plasmid DNA.

A- Mutations introduced into synthetic oligonucleotides used for the PCR amplification of CH2 domain.



B- Plasmid DNA linearized inside CH2 domain and co-transformed with PCR fragment into competent DH5 α .



C- Cloning mediated by homologous recombination yields transformants harbouring recombinant plasmids.

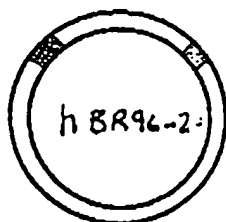
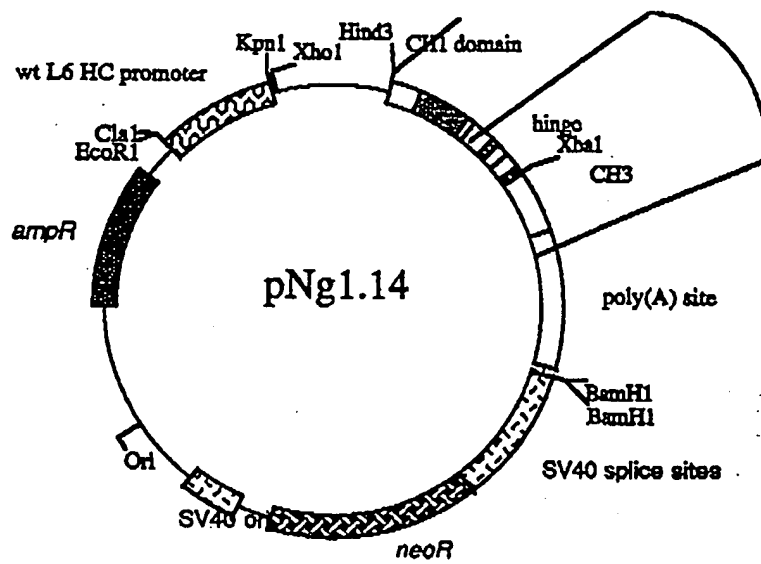


Figure 10

Figure 11



03905293-080197

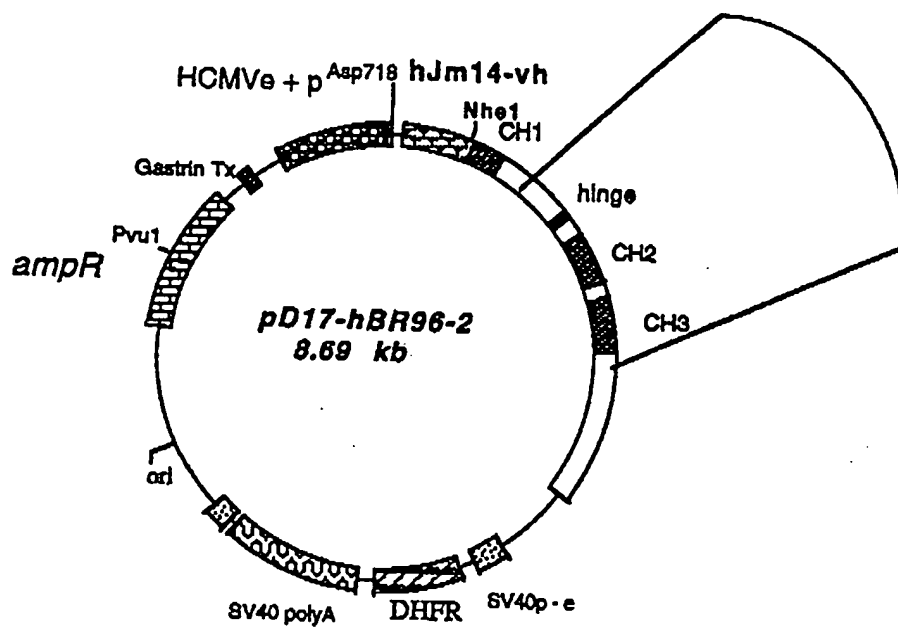


Figure 12

08905293-080197

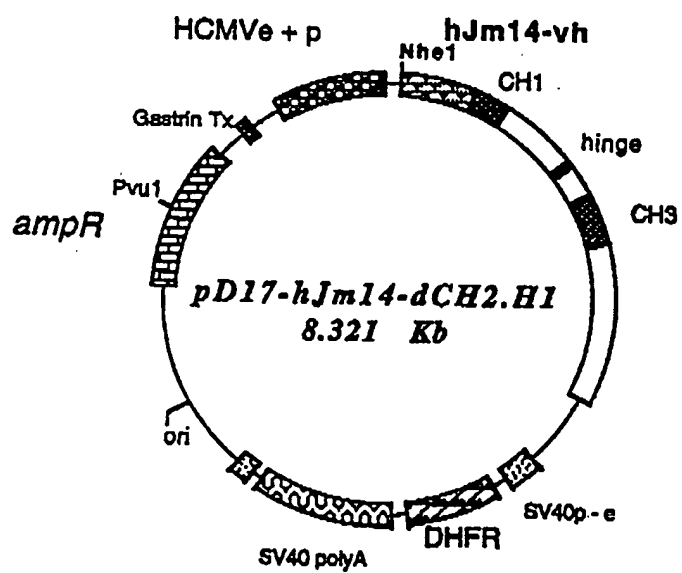


Figure 13

pD17-cJ-dCH2.H1

| | | | | | | | | |
|-------------|-------------|-------------|------------|-------------|-------------|-------------|------------|-------------|
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 |
| GACGATCGG | GAGATCTGCT | AGGTGACCTG | AGGCGCGCGG | GCTTCGAATA | GCCAGAGTAA | CCTTTTTTTT | TAATTTTATT | TTATTTTATT |
| CTGCCTAGCC | CTCTAGACGA | TCCACTGGAC | TCCGCGCGGC | CGAAGCTTAT | CGGTCTCATT | GGAAAAAAA | ATTAAAAATA | AATAAAATAA |
| 100 | 110 | 120 | 130 | 140 | 150 | 160 | 170 | 180 |
| TTTGAGATGG | AGTTTGGCGC | CGATCTCCCG | ATCCCCTATG | GTCGACTCTC | AGTACAAATCT | GCTCTGATGC | CGCATAGTTA | AGCCAGTATC |
| AAACTCTACC | TCAAACCGCG | GCTAGAGGGC | TAGGGGATAC | CAGCTGAGAG | TCATGTTTGA | CGAGACTACG | CGGTATCAAT | TCGGTTCATAG |
| 190 | 200 | 210 | 220 | 230 | 240 | 250 | 260 | 270 |
| TGCTCCCTGC | TTGTGTGTTG | GAGGTGCTG | AGTAGTGGC | GAGCAAAAT | TAAGCTACAA | CAAGGCAAGG | CTTGACCGAC | AATTGCATGA |
| ACGAGGGACG | AACACACAAC | CTCCAGCGAC | TCATCACGGC | CTCGTTTTAA | ATTCTGATTT | GTTCGGTTCC | GAACTGGCTG | TTAACGTACT |
| 280 | 290 | 300 | 310 | 320 | 330 | 340 | 350 | 360 |
| AGAATCTGCT | TAGGGTTAGG | CGTTTTCGCG | TGCTTCGCGA | TGTACGGGCC | AGATATACGC | GTTGACATTTG | ATTATTGACT | AGTTATTAAAT |
| TCTTAGACGA | ATCCCAATCC | GCAAAACGCG | ACGAAGCGCT | ACATGCCCGG | TCTATATGGC | CAACTGTAAAC | TAATAACTGA | TCAATAATTA |
| 370 | 380 | 390 | 400 | 410 | 420 | 430 | 440 | 450 |
| AGTAATCAAT | TACGGGGTCA | TTAGTTTCATA | GCCCATATAT | GGAGTTCCGC | GTTACATAAC | TTACGGTAAA | TGGCCCCCTT | GGCTGACCGC |
| TCATTAGTTA | ATGCCCCAGT | AATCAAGTAT | CGGGTATATA | CCTCAAGGCG | CAATGTATTG | AATGCCATTT | ACCGGCGGGA | CCGACTGGCG |
| 460 | 470 | 480 | 490 | 500 | 510 | 520 | 530 | 540 |
| CCAACGACCC | CCGCCCATTG | ACGTCAATAA | TGACGTAATG | TCCCATAGTA | ACGCCAATAG | GGACTTTTCCA | TTGACGTCAA | TGGGTGGACT |
| GGTTGCTGGG | GGCGGGTAAC | TGCAGTTATT | ACTGCATACA | AGGGTATCAT | TGCGGTTATC | CCTGAAGAAGT | AACTGCAGTT | ACCCACCTGA |
| 550 | 560 | 570 | 580 | 590 | 600 | 610 | 620 | 630 |
| ATTTACGGTA | AAC TGCCAC | TTGGCAGTAC | ATCAAGTATA | TCATATGCCA | AGTACGCCCC | CTATTGACGT | CAATGACGGT | AAATGGCCCCG |
| TAAATGCCAT | TTGACGGGTG | AACCGTCAATG | TAGTTTCACT | AGTATACGGT | TCATGCGGGG | GATAACTGCA | GTTACTGCCA | TTTACCCGGGC |
| 640 | 650 | 660 | 670 | 680 | 690 | 700 | 710 | 720 |
| CCTGGCAITTA | TGCCCAGTAC | ATGACCTTAT | GGGACTTTCC | TACTTTGGCAG | TACATCTACG | TATTAGTCAAT | CGCTATTACC | ATGGTGTATGC |
| GGACCGTAAT | ACGGGTCAATG | TACTTGAATA | CCCTGAAAGG | ATGAACCGTC | ATGTAGATGC | ATAATCAGTA | GGGATAATGG | TACCACTACG |
| 730 | 740 | 750 | 760 | 770 | 780 | 790 | 800 | 810 |
| GGTTTGTGCA | GTACATCAAT | GGGCGTGGAT | AGCGGTTTGA | CTCAGCGGGA | TTTCCAAGTC | TCCACCCCAT | TGACGTCAAT | GGGAGTTTGT |
| CCAAAACCGT | CATGTAGTTA | CCCGCACCTA | TCGCCAAACT | GAGTGCCTCT | AAAGGTTTCA | AGGTGGGGTA | ACTGCAGTTA | CCCTCAAACA |
| 820 | 830 | 840 | 850 | 860 | 870 | 880 | 890 | 900 |
| TTTGGCACCA | AAATCAACGG | GACTTTTCCAA | AATGTCGTAA | CAACTCCGCC | CCATTGACGC | AAATGGGCGG | TAGGCGTGTG | CGGTGGGAGG |
| AAACCGTGGT | TTTAGTTGCC | CTGAAAGGTT | TTACAGGCAT | GTTGAGGCGG | GGTAACTGCG | TTTACCCGCC | ATCCGCACAT | GCCACCCCTCC |

Figure 14

pD17-cJ-dCH2.H1

| | | | | | | | | | | | | | | | | | |
|------|-------------|------|------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|--------------|
| 910 | TCTATATAAG | 920 | TGGCTAACTA | 930 | GAGAACCAC | 940 | TGCTTACTGG | 950 | CTTATCGAAA | 960 | TTAATACGAC | 970 | TCACATATAGG | 980 | TCACTATAGG | 990 | GAGACCCAAAG |
| | AGATATATTC | | GTCTCGAGAG | | ACCGATTGAT | | CTCTTGGGTG | | ACGAATGACC | | GAATAGCTTT | | AATATATGCTG | | AGTGATATCC | | CTCTGGGTTC |
| 1000 | CTTGGTACCA | 1010 | ATTTAAATYG | 1020 | ATATCTCCTT | 1030 | AGGTCTCGAG | 1040 | TCTCTAGATA | 1050 | ACCGGTCAAT | 1060 | CGATTGGAAT | 1070 | TCCTGGCGCC | 1080 | GCTTGTGCTAGC |
| | GAACCATGGT | | TAAATTTAAC | | TATAGAGGAA | | TCCAGAGCTC | | AGAGATCTAT | | TGGCCAGTTA | | GCTAACCTTA | | AGAACGCCCG | | CGAACGATCG |
| 1090 | CACCATGGAG | 1100 | TTGTGGTTAA | 1110 | GCTTGGTCCT | 1120 | TCCTTGTCTT | 1130 | TGTTTTAAAA | 1140 | GGTGTCCAGT | 1150 | GTGAAGTGAA | 1160 | TCCTGGTGGAG | 1170 | TCCTGGGGGAG |
| | GTGGTACCTC | | AACACCAATT | | CGAACCCAGGA | | AGGAACAGGA | | AGGAATTTT | | CCACAGGTCA | | CACCTTCACTT | | AGACCACCTC | | AGACCCCTTC |
| 1180 | GCTTAGTGCA | 1190 | GCCTGGAGGG | 1200 | TCCCTGAAAG | 1210 | TCTCTGTGT | 1220 | AACCTCTGGA | 1230 | TTCACCTTCA | 1240 | GTGACTATTA | 1250 | CATGTATTGG | 1260 | GTTCGCCCAGA |
| | CGAATCACGT | | CGGACCTCCC | | AGGGACTTTC | | AGAGGACACA | | TTGGAGACCT | | AAGTGAAAGT | | CACCTGATAAT | | GTACATAAAC | | CAAGCGGTCT |
| 1270 | CTCCAGAGAA | 1280 | GAGGCTGGAG | 1290 | TGGGTGCGAT | 1300 | ACATTAGTCA | 1310 | AGGTGGTGAT | 1320 | ATAACCGACT | 1330 | ATCCAGACAC | 1340 | TGTAAGGGGT | 1350 | CGATTTCACCA |
| | GAGGTCTCTT | | CTCCGACCTC | | ACCCAGCGTA | | TGTAATCAGT | | TCCACCACCTA | | TATTGGCTGA | | TAGGTCTGTG | | ACATTTCCTCA | | GCTAAGTGGT |
| 1360 | TCCTCCAGAGA | 1370 | CAATGCCAAG | 1380 | AACACCCCTGT | 1390 | ACCTGCAAT | 1400 | GAGCCGTCTG | 1410 | AAGTCTGAGG | 1420 | ACACAGCCAT | 1430 | GTATTACTGT | 1440 | GCAAGAGGGCC |
| | AGAGGTCTCT | | GTACCGGTTC | | TTGTGGGACA | | TGGACGTTTA | | CTCGGCAGAC | | TTCAGACTCC | | TGTGTCTGGTA | | CATAATGACA | | CGTCTCTCCGG |
| 1450 | TGGACGACGG | 1460 | GGCCTGGTTT | 1470 | GCCTTACTGG | 1480 | GCCAAGGGAC | 1490 | TCCTGTCTAG | 1500 | CTAGCACCAA | 1510 | GGGCCCATCG | 1520 | GTCTTCTCCCC | 1530 | CAGAAGGGGG |
| | ACCTGTCTCC | | CCGGACCAA | | CGAATGACCC | | CGGTTCCTCTG | | AGACCAGTGC | | CAGAGACATC | | GATCTGTGGT | | CCCGGGTAGC | | CAGAAGGGGG |
| 1540 | TGGCACCCCTC | 1550 | CTCCAAGAGC | 1560 | ACCTCTGGGG | 1570 | GCACAGCGGC | 1580 | CTTGGGCTGC | 1590 | CTGGTCAAGG | 1600 | ACTACTTCCC | 1610 | CGAACCCGTG | 1620 | ACGGTGTCTGT |
| | ACCGTGGGAG | | GAGGTCTCTG | | TGGAGACCCC | | CGTGTCTGCG | | GGACCCGACG | | GACCACTTCC | | TGATGAAGGG | | GCTTGGCCAC | | TGCCACAGCA |
| 1630 | GGAACCTCAGG | 1640 | CGCCCTGACC | 1650 | AGCGGCGTGC | 1660 | ACACCTTCCC | 1670 | GGCTGTCTTA | 1680 | CAGTCTCTCAG | 1690 | GACTCTACTC | 1700 | CCTCAGCAGC | 1710 | GTGGTCAACCG |
| | CCTTGAGTCC | | GCGGGACTGG | | TCGCCGCGACG | | TGTGGAAGGG | | CCGACAGGAT | | GTCAAGGATC | | CTGAGATGAG | | GGAGTCGTGC | | CACCAGTGGC |
| 1720 | TGCCCTCCAG | 1730 | CAGCTTGGGC | 1740 | ACCCAGACCT | 1750 | ACATCTGCAA | 1760 | CGTGAATCAC | 1770 | AAGCCACGCA | 1780 | ACACCAAGGT | 1790 | GGACAAGAAA | 1800 | GTTGGTGTAGA |
| | ACGGGAGGTC | | GTCGAACCCG | | TGGGTCTGGA | | TGTAGACGTT | | GCACCTTAGTG | | TTCGGGTCTGT | | TGTGGTTCCA | | CCTGTCTCTT | | CAACCACTCT |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | |
|-------------|-------------|-------------|------------|-------------|------------|------------|-------------|-------------|
| 1810 | 1820 | 1830 | 1840 | 1850 | 1860 | 1870 | 1880 | 1890 |
| GGCAGACACA | GGGAGGGAGG | GTGCTCTGCTG | GAAGCCAGGC | TCAGCGCTCC | TGCCTGGACG | CATCCCGGCT | ATGCAGCCCC | AGTCCAGGGC |
| CCGGTCGTGT | CCCTCCCTCC | CACAGACGAC | CTTCGGTCCG | AGTCGGAGG | ACGGACCTGC | GTAGGGCCGA | TACGTCGGGG | TCAGGTCCCC |
| 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 |
| AGCAAGGCAG | GCCCCGTCTG | CCTCTTCACC | CGGAGGCCTC | TGCCCCCCCC | ACTCATGCTC | AGGGAGAGGG | TCCTCTGGCT | TTTTCCCCCAG |
| TCGTTCCCGTC | CGGGGCAGAC | GGAGAAGTGG | GCCTCCGGAG | ACGGGCGGGG | TGAGTACGAG | TCCCTCTCCC | AGAGACCGA | AAAAGGGGTC |
| 1990 | 2000 | 2010 | 2020 | 2030 | 2040 | 2050 | 2060 | 2070 |
| GCTCTGGGCA | GGCACAGGCT | AGGTGCCCT | AACCCAGGCC | CTGCACACAA | AGGGGCAGGT | GCTGGGCTCA | GACCTGCCAA | GAGCCATATC |
| CGAGACCCGT | CCGTGTCCGA | TCCACGGGGA | TTGGGTCCGG | GACGTGTGTT | TCCCCGTCCA | CGACCCGAGT | CTGGACGGTT | CTCGGTATAG |
| 2080 | 2090 | 2100 | 2110 | 2120 | 2130 | 2140 | 2150 | 2160 |
| CGGGAGGACC | CTGCCCCCTGA | CCTAAGCCCA | CCCCAAAGGC | CAAACTCTCC | ACTCCCTCAG | CTCCGACACC | TTCTCTCTC | CCAGATTCCA |
| GCCCTCCTGG | GACGGGGACT | GGAATCGGGT | GGGGTTTCCG | GTTTGAGAGG | TGAGGGAGTC | GAGCCTGTGG | AAGAGAGGAG | GGTCTAAGGT |
| 2170 | 2180 | 2190 | 2200 | 2210 | 2220 | 2230 | 2240 | 2250 |
| GTAACCTCCA | ATCTTCTCTC | TGCAGAGCCC | AAATCTTGTG | ACAAACTCA | CACATGCCCA | CCGTGCCCAG | GTAAGCCAGC | CCAGGCCCTCG |
| CATTGAGGGT | TAGAAGAGAG | ACGTCTCCGG | TTTAGAACAC | TGTTTGTAGT | GTGTACGGGT | GGCACGGGTC | CATTCCGGTCG | GGTCCGGAGC |
| 2260 | 2270 | 2280 | 2290 | 2300 | 2310 | 2320 | 2330 | 2340 |
| CCCTCCAGCT | CAAGGCGGGA | CAGGTGCCCT | AGAGTAGCCT | GCATCCAGGG | ACACACACAG | TGGGTACCAA | CATGTCCGGA | GCCACATGGA |
| GGGAGGTCTGA | GTTCCGCCCT | GTCCACGGGA | TCTCATCGGA | CGTAGGTCCC | TGTGTGGTGC | ACCCATGGTT | GTACAGGCCCT | CGGTGTACCT |
| 2350 | 2360 | 2370 | 2380 | 2390 | 2400 | 2410 | 2420 | 2430 |
| CAGAGGCCGG | CTCGGCCCCAC | CCTCTGCCCT | GAGAGTGACC | GCTGTACCAA | CCTCTGTCCC | TACAGGGCAG | CCCCGAGAAC | CACAGGTGTA |
| GTCTCCGGCC | GAGCCGGGTG | GGAGACGGGA | CTCTCACTGG | CGACATGGTT | GGAGACAGGG | ATGTCCCCGC | GGGGCTCTTG | GTGTCCACAT |
| 2440 | 2450 | 2460 | 2470 | 2480 | 2490 | 2500 | 2510 | 2520 |
| CACCCCTGCC | CCATCCCGGG | ATGAGCTGAC | CAAGAACCAG | GTACAGCCTGA | CCTGCCTGGT | CAAAGGCTTC | TATCCCAGCG | ACATCGCCGT |
| GTGGGACGGG | GGTAGGGCCC | TACTCGACTG | GTTCTTGGTC | CAGTCGGACT | GGACGGACCA | GTTTCCGAAG | ATAGGGTCCG | TGTAGCGGCA |
| 2530 | 2540 | 2550 | 2560 | 2570 | 2580 | 2590 | 2600 | 2610 |
| GGAGTGGGAG | AGCAATGGGC | AGCCGGAGAA | CAACTACAA | ACCACGCCCTC | CCGTGCTGGA | CTCCGACGGC | TCCTTCTTCC | TCTACAGCAA |
| CCTCACCCCTC | TCGTTACCCG | TCGGCCCTCTT | GTTGATGTTT | TGGTCCGGAG | GGCACGACCT | GAGGCTGCCC | AGGAAGAAGG | AGATGTCTGT |
| 2620 | 2630 | 2640 | 2650 | 2660 | 2670 | 2680 | 2690 | 2700 |
| GCTCACCGTG | GACAAGAGCA | GGTGGCAGCA | GGGAACGTC | TTCTCATGCT | CCGTGATGCA | TGAGGCTCTG | CACAACCACT | ACACGCAGAA |
| CGAGTGGCAC | CTGTTCTCGT | CCACCGTCGT | CCCCTTGCAG | AAGAGTACGA | GGCACTACGT | ACTCCGAGAC | GTGTTGGTGA | TGTGCGTCTT |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | | | | | | | | | | |
|------|------------|------|------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|-------------|------------|
| 2710 | GAGCCTCTCC | 2720 | CTGTCTCCGG | 2730 | GTAATGAGT | 2740 | GCGACGGCG | 2750 | GCAAGCCCC | 2760 | GCTCCCGGG | 2770 | CTCTCGCGGT | 2780 | CGCAGGAGG | 2790 | TGCTTGGCAC |
| | CTCGGAGAGG | | GACAGAGGCC | | CATTYACTCA | | CGCTGCCGGC | | CGTTCCGGGG | | CGAGGGGGCC | | GAGAGCGCCA | | GCGTGTCTCT | ACGNAACCGTG | |
| 2800 | GTACCCCTTG | 2810 | TACATACTTC | 2820 | CCGGGCGCCC | 2830 | AGCATGGAAA | 2840 | TAAAGCACCC | 2850 | AGCGCTGCCC | 2860 | TGGGGCCCTTG | 2870 | CGAGACTGTG | 2880 | ATGGTTCTTT |
| | CATGGGGGAC | | ATGTAAGAAG | | GGCCCGCGGG | | TGCTACCTTT | | ATTTCGTGGG | | TCCGCGACGG | | ACCCGGGGAC | | GCTCTGACAC | TACCAAGAAA | |
| 2890 | CCACGGGTCA | 2900 | GGCCGAGTCT | 2910 | GAGGCCTGAG | 2920 | TGGCATGAGG | 2930 | GAGGCAGAGC | 2940 | GGGTCCCACT | 2950 | GTCCCCACAC | 2960 | TGGCCCCAGG | 2970 | TGTGCAGGTG |
| | GGTGCCCACT | | CCGGCTCAGA | | CTCCGGACTC | | ACCGTACTCC | | CTCCGTCTCG | | CCCAGGTGA | | CAGGGGTGTG | | ACCGGGTCCG | ACACGTCCAC | |
| 2980 | TGCCCTGGCC | 2990 | CCCTAGGGTG | 3000 | GGGCTCAGCC | 3010 | AGGGGCTGCC | 3020 | CTCGGCAGGG | 3030 | TGGGGGATTT | 3040 | GCCAGCGTGG | 3050 | CCCTCCCTCC | 3060 | AGCAGCACTT |
| | ACGGACCCCG | | GGGATCCAC | | CCCAGTCCG | | TCCCCGACGG | | GAGCCGTCCC | | ACCCCTAAA | | CGGTCCGACC | | GGGAGGGAGG | TGCTCGTGG | |
| 3070 | GCCCTGGGCT | 3080 | GGGCCACGGG | 3090 | AAGCCCTAGG | 3100 | AGCCCCCTGG | 3110 | GACAGACACA | 3120 | CAGCCCCCTG | 3130 | CTCTGTAGGA | 3140 | GACTGTCTCT | 3150 | TTCTGTGAGC |
| | CGGGACCCGA | | CCCGTGTCCC | | TTCCGGGATCC | | TCCGGGACCC | | CTGTCTGTGT | | GTCGGGAGC | | GAGACATCCT | | CTGACACGGAC | AAGACACTCG | |
| 3160 | GCCCCGTGCC | 3170 | TCCCGACCTC | 3180 | CATGCCCACT | 3190 | CGGGGGCATG | 3200 | CCTAGTCCAT | 3210 | GTGCGTAGGG | 3220 | ACAGGCCCTC | 3230 | CCCTACCCAT | 3240 | CTACCCCCAC |
| | CGGGGACAGG | | AGGGCTGGAG | | GTACGGGTGA | | GCCCCCGTAC | | GGATCAGGTA | | CACGCATCCC | | TGTCCGGGAG | | GGAGTGGGTA | GATGGGGGTG | |
| 3250 | GGCACTAAC | 3260 | CCTGGCTGCC | 3270 | CTGCCACGCC | 3280 | TCCGACCCGC | 3290 | ATGGGGACAC | 3300 | AACCGACTCC | 3310 | GGGGACATGC | 3320 | ACTCTCGGGC | 3330 | CCTGTGGAGG |
| | CCGTGATTGG | | GGACCGACGG | | GACGGGTCCG | | AGCGTGGCG | | TACCCCTGTG | | TTGGCTGAGG | | CCCCTGTACG | | TGAGAGCCCCG | GGACACCTCC | |
| 3340 | GACTGGTGCA | 3350 | GATGCCACCA | 3360 | CACACACTCA | 3370 | GCCCAGACCC | 3380 | GTTCACAAA | 3390 | CCCCGCACCTG | 3400 | AGGTTGGCCG | 3410 | GCCACACGGC | 3420 | CACCACACAC |
| | CTGACCACGT | | CTACGGGTGT | | GTGTGTGAGT | | CGGGTCTGGG | | CAAGTTGTTT | | GGGGCGTGAC | | TCCACCCGGC | | CGGTGTGCGG | GTTGTGTGTG | |
| 3430 | ACACGTGCAC | 3440 | GCCTCACACA | 3450 | CGGAGCCTCA | 3460 | CCCGGGCGAA | 3470 | CTGCACAGCA | 3480 | CCAGAGCCAG | 3490 | AGCAAGGTCC | 3500 | TGGCACACGT | 3510 | GAACACTCCT |
| | TGTGACAGTG | | CGGAGTGTGT | | GCCTCGGAGT | | GGGCCCCGCTT | | GACGTGTCTGT | | GGGTCTGGTC | | TCGTTCCAGG | | AGCGTGTGCA | CTTGTGAGGA | |
| 3520 | CGGACACAGG | 3530 | CCCCACGAG | 3540 | CCCCACGGCG | 3550 | CACCTCAAGG | 3560 | CCCACGAGCC | 3570 | TCTGGGAGC | 3580 | TTCTCCACAT | 3590 | GCTGACCTGC | 3600 | TCAGACAAAC |
| | GCCTGTGTCC | | GGGGTGTCTC | | GGGGTGCGCC | | GTGGAGTTCC | | GGGTGTCTCG | | AGAGCCGTGC | | AAGAGGTGTA | | CGACTGGACG | AGTCTGTTTG | |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | |
|------------|-------------|------------|-------------|-------------|-------------|------------|------------|------------|
| 3610 | 3620 | 3630 | 3640 | 3650 | 3660 | 3670 | 3680 | 3690 |
| CCAGCCCTCC | TCTACAAGG | GTGCCCCTGC | AGCCGCCACA | CACACACAGG | GGATCACACA | CCACGTCACG | TCCCTGGCCC | TGGCCCACTT |
| GGTCGGGAGG | AGAGTGTTC | CACGGGGACG | TCGGGGGTGT | GTGTGTGTC | CCTAGTGTGT | GGTGCAGTGC | AGGGACCGGG | ACCGGGTGAA |
| 3700 | 3710 | 3720 | 3730 | 3740 | 3750 | 3760 | 3770 | 3780 |
| CCCAGTGCCG | CCCTTCCCTG | CAGGACGGAT | CAGCCTCGAC | TGTGCTTCT | AGTTGCCAGC | CATCTGTGT | TTGCCCTTCC | CCCGTGCCTT |
| GGGTACACGG | GGGAAGGGAC | GTCTTGCTTA | GTCTTGCTTA | GTCTTGCTTA | GTCTTGCTTA | GTCTTGCTTA | GTCTTGCTTA | GTCTTGCTTA |
| 3790 | 3800 | 3810 | 3820 | 3830 | 3840 | 3850 | 3860 | 3870 |
| CCTTGACCTT | GGAAGGTGCC | ACTCCCACTG | TCCCTTCCCTA | ATAAATGAG | GAAATGCAAT | CGCATTTGCT | GAGTAGGTGT | CATTCTATT |
| GGAAGTGGGA | CCTTCCACGG | TGAGGGTGAC | AGGAAAGGAT | TATTTTACTC | CTTTAAACGTA | CGGTAACAGA | CTCATCCACA | GTAAGATAAG |
| 3880 | 3890 | 3900 | 3910 | 3920 | 3930 | 3940 | 3950 | 3960 |
| TGGGGGGTGG | GGTGGGGCAG | GACAGCAAGG | GGGAGGATTT | GGAAAGACAAT | AGCAGGCAATG | CTGGGGATGC | GGTGGGCTCT | ATGGCTTCTG |
| ACCCCCCAAC | CCACCCCGTC | CTGTCTGTTC | CCCTCCTAAC | CCCTCCTAAC | CCCTCCTAAC | CCCTCCTAAC | CCCTCCTAAC | CCCTCCTAAC |
| 3970 | 3980 | 3990 | 4000 | 4010 | 4020 | 4030 | 4040 | 4050 |
| AGGCGGAAAG | AACCACTTGG | GGCTCTAGGG | GGTATCCCCA | CGCGCCCTGT | AGCGGGCAAT | TAAAGCGCGG | GGGTGTGGTG | GTTACGGGCA |
| TCCGCTTTTC | TTGGTGGACC | CCGAGATCCC | CCATAGGGGT | GGCGGGGACA | TCGCGCGGTA | ATTGCGCGG | CCACACCCAC | CAATGCGCGT |
| 4060 | 4070 | 4080 | 4090 | 4100 | 4110 | 4120 | 4130 | 4140 |
| GGGTGACCGC | TACACTTGGC | AGCGCCCTAG | CGCCCGCTCC | TTTCGGTTTC | TTCCCTTCTT | TTCTCGCCAC | GTTCGCGCGG | CCCTCAAAA |
| CGCACTGGCG | ATGTGAACGG | TCGCGGGATC | CGCGGGGAGG | AAAGCGAAAG | AAGGGAAGGA | AAGAGCGGTG | CAAGCGGCCC | GGAGAGTTTT |
| 4150 | 4160 | 4170 | 4180 | 4190 | 4200 | 4210 | 4220 | 4230 |
| AAGGGAAAAA | AAGCAATGAT | CTCAATTAGT | CAGCAACCAT | AGTCCCGCCC | CTAACTCCGC | CCATCCCGCC | CCTAACTCCG | CCCAGTTCCG |
| TTCCCTTTTT | TTCTGTACGTA | GAGTTAATCA | GTCTGTGGTA | TCAGGGCGGG | GATTGAGGCG | GGTAGGGCGG | GGATTGAGGC | GGGTCAAGGC |
| 4240 | 4250 | 4260 | 4270 | 4280 | 4290 | 4300 | 4310 | 4320 |
| CCCATTCTCC | GCCCCATGGC | TGACTAATTT | TTTTTATTTA | TGCAGAGGCC | GAGGCCGCTT | CGGCCTCTGA | GCTATTCCAG | AAGTAGTGAG |
| GGGTAAGAGG | CGGGGTACCG | ACTGATTAAA | AAAAATAAAT | ACGTCTCCGG | CTCCGGCGGA | GCCGGAGACT | CGATAAGGTC | TTCATCACTC |
| 4330 | 4340 | 4350 | 4360 | 4370 | 4380 | 4390 | 4400 | 4410 |
| GAGGCTTTTT | TGAGGCTCTA | GGCTTTTGCA | AAAAGCTTGG | ACAGCTCAGG | GCTGCGATTT | CGCGCCAAAC | TTGACGGCAA | TCCTAGCGTG |
| CTCCGAAAAA | ACCTCCGGAT | CCGAAACGCT | TTTTCGAACC | TGTCGAGTCC | CGACGCTAAA | GCGCGGTTTG | AACTGCCGTT | AGGATCGCAC |
| 4420 | 4430 | 4440 | 4450 | 4460 | 4470 | 4480 | 4490 | 4500 |
| AAGGCTGGTA | GGATTTTATC | CCCGCTGCCA | TCATGGTTCC | ACCATTTAAC | TGCATCGTCG | CCGTGTCCCA | AAATATGGGG | ATTGGCAAGA |
| TTCCGACCAT | CCTAAAAATAG | GGGGGACGGT | AGTACCAAGC | TGGTAACCTG | ACGTAGCAGC | GGCACAGGGT | TTTATACCCC | TAACCGTTCT |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | | | | | | | | | | |
|------|-------------|------|--------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| 4510 | ACCGAGACCT | 4520 | ACCCCTGGCCT | 4530 | CCGCTCAGGA | 4540 | ACGAGTTCAA | 4550 | GTACTTCCAA | 4560 | AGAATGACCA | 4570 | CAACCTCTTC | 4580 | AGTGAAGGT | 4590 | AAACAGAATC |
| | TGCCCTCTGA | | TGGGACCCGA | | GGCGAGTCCT | | TGCTCAAGTT | | CATGAAGGTT | | TCTTACTGGT | | GTTGGAGAAG | | TCACCTTCCA | | TTTGTCTTTAG |
| 4600 | TGGTGATTAT | 4610 | GGGTAGGAAA | 4620 | ACCTGGTTCT | 4630 | CCATTCTCTGA | 4640 | GAAGAAATCGA | 4650 | CCTTTAAAGG | 4660 | ACAGAAATTA | 4670 | TATAGTTCTC | 4680 | AGTAGAGAAC |
| | ACCACTAATA | | CCCATCTCTT | | TGGACCAAGA | | GGTAAGGACT | | CTTCTTAGCT | | GGAAATTTCC | | TGCTTAAT | | ATATCAAGAG | | TCATCTCTTG |
| 4690 | TCAAAGAAC | 4700 | ACCACGAGGA | 4710 | GCTCATTTTC | 4720 | TTGCCAAAAG | 4730 | TTTGGATGAT | 4740 | GCCTTAAAGAC | 4750 | TTATTGAACA | 4760 | ACCGGAATTG | 4770 | GCAAGTAAAG |
| | AGTTTCTTGG | | TGGTGTCTCT | | CGAGTAAAG | | AACGGTTTTC | | AAACCTACTA | | CGGAATTTCTG | | AATAACTTGT | | TGGCCTTAAC | | CGTTCAATTC |
| 4780 | TAGACATGGT | 4790 | TTGGATAGTC | 4800 | GGAGGCAGTT | 4810 | CTGTATTACCA | 4820 | GGAAAGCCATG | 4830 | AATCAACCAG | 4840 | GCCACCTTAG | 4850 | ACTCTTTGTG | 4860 | ACAAGGATCA |
| | ATCTGTACCA | | AACCTATCAG | | CCTCCGTCAG | | GACAAATGGT | | CCTTCGGTAC | | TTAGTTGGTC | | CGGTGGAATC | | TGAGAAACAC | | TGTTCCCTAGT |
| 4870 | TGCAGGAATT | 4880 | TGAAAGTGAC | 4890 | ACGTTTTTTC | 4900 | CAGAAATTGA | 4910 | TTTGGGGAAA | 4920 | TATAAACTTC | 4930 | TCCCAGAATA | 4940 | CCCAGGCGTC | 4950 | CTCTCTGAGG |
| | ACGTCTCTAA | | ACTTTCACCTG | | TGCAAAAAGG | | GTCTTTAACT | | AAACCCCTTT | | ATATTGAAG | | AGGGTCTTAT | | GGGTCCGCAG | | GAGAGACTCC |
| 4960 | TCCAGGAGGA | 4970 | AAAAGGCATC | 4980 | AAGTATAAGT | 4990 | TTGAAGTCTA | 5000 | CGAGAAGAAA | 5010 | GACTAACAGG | 5020 | AAGATGCTTT | 5030 | CAAGTTCTCT | 5040 | GCTCCCTTCC |
| | AGGTCTCTCT | | TTTTCCGTTAG | | TTCAATATTCA | | AACTTCAGAT | | GCTCTTCTTT | | CTGATTGTCC | | TTCTACGAAA | | GTTCAAGAGA | | CGAGGGGAGG |
| 5050 | TAAAGCTATG | 5060 | CATTTTATATA | 5070 | AGACCATGGG | 5080 | ACTTTTGTCTG | 5090 | GCTTTTAGATC | 5100 | TCTTTGTGAA | 5110 | GGAACCTTAC | 5120 | TTCTGTGGTG | 5130 | TGACATAAAT |
| | ATTTTCGATAC | | GTAATAAATAT | | TCGTGTACCC | | TGAAAAACGAC | | CGAAATCTAG | | AGAAACACTT | | CCTTGAATG | | AAGACACCCAC | | ACTGTATTAA |
| 5140 | GGACAAACTA | 5150 | CCTACACAGAGA | 5160 | TTTAAAGCTC | 5170 | TAAGGTAAAT | 5180 | ATAAAATTTT | 5190 | TAAGTGTATA | 5200 | ATGTGTAAA | 5210 | CTACTGATTC | 5220 | TAATTGTTTG |
| | CCGTGTTTGAT | | GGATGTCTCT | | AAATTTTCGAG | | ATTCCATTTA | | TATTTTAAAA | | ATTCACATAT | | TACACAAATTT | | GATGACTAAG | | ATTAACAAAC |
| 5230 | TGTATTTTAG | 5240 | ATTCCAACCT | 5250 | ATGGAACCTGA | 5260 | TGAATGGGAG | 5270 | CAGTGGTGGG | 5280 | ATGCCCTTTAA | 5290 | TGAGGAAAAC | 5300 | CTGTTTTGCT | 5310 | CAGAAGAAAT |
| | ACATAAAATC | | TAAGGTTTGA | | TACCTTGACT | | ACTTACCCTC | | GTCACCACCT | | TACGGAAATTT | | ACTCCTTTTG | | GACAAAAACGA | | GTCCTTCTTTA |
| 5320 | GCCATCTAGT | 5330 | GATGATGAGG | 5340 | CTCTCAACAT | 5350 | CTCTGCTGA | 5360 | TCTACTCCTC | 5370 | CAAAAAAGAA | 5380 | GAGAAAGGTA | 5390 | GAAGACCCCA | 5400 | AGGACTTTTCC |
| | CGGTAGATCA | | CTACTACTCC | | GATGACGACT | | GAGAGTTGTA | | AGATGAGGAG | | GTTTTTTTCTT | | CTCTTTCCAT | | CTTCTGGGGT | | TCCTGAAAGG |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | | | | | | | | | | |
|------|-------------|------|-------------|------|-------------|------|------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| 5410 | TTCAGAAATG | 5420 | CTAAGTTTTT | 5430 | TGAGTCATGC | 5440 | TGCTTTTAGT | 5450 | AATAGAACTC | 5460 | TTGCTTGCTT | 5470 | TGCTATTATC | 5480 | ACCACAAAGG | 5490 | AAAAAGCTGC |
| | AAGTCTTAAC | | GATTCAAAAA | | ACTCAGTACG | | ACACAAATCA | | TTATCTTGAG | | AACGAACGAA | | ACGATAAATG | | TGGTGTITTC | | TTTTTCGACG |
| 5500 | ACTGCTATAC | 5510 | AAGAAAATPA | 5520 | TGGAAAAATA | 5530 | TTCTGTAAAC | 5540 | TTTATAAGTA | 5550 | GGCATAACAG | 5560 | TTATAATCAT | 5570 | AACATACITG | 5580 | TTTTTCTTTAC |
| | TGACGATATG | | TTCTTTTAAAT | | ACCTTTTAT | | AAGACATGG | | AAATATTTCAT | | CCGTATTGTC | | AATATTAGTA | | TTGTATGACA | | AAAAAGAATG |
| 5590 | TCCACACAGG | 5600 | CATAGAGTGT | 5610 | CTGCTATTAA | 5620 | TAACTATGCT | 5630 | CAAAAATGT | 5640 | GTACCTTTAG | 5650 | CTTTTAAAT | 5660 | TGTAAGGGG | 5670 | TTAATAAGGA |
| | AGGTGTGTCC | | GTATCTCACA | | GACGATAAT | | ATTGATACGA | | GTTTTTAACA | | CATGGAATC | | GAAAAATTAA | | ACATTTCCCC | | AATTTATCCT |
| 5680 | ATATTTGATG | 5690 | TATAGTCCCT | 5700 | TGACTAGAGA | 5710 | TCATAATCAG | 5720 | CCATACCACA | 5730 | TTTGTAGAGG | 5740 | TTTTACTTGC | 5750 | TTTTAAAAAC | 5760 | CTCCCCACAC |
| | TATAAACTAC | | ATATCACGGA | | ACTGATCTCT | | AGTATTAGTC | | GGTATGGTGT | | AAACATCTCC | | AAAATGAACG | | AAATTTTTTG | | GAGGGTGTGG |
| 5770 | TCCCCCTGAA | 5780 | CCTGAAACAT | 5790 | AAAATGAATG | 5800 | CAATTGTGT | 5810 | TGTTAACTTG | 5820 | TTTATTGCAG | 5830 | CTTATAATGG | 5840 | TTACAAATAA | 5850 | AGCAATPAGCA |
| | AGGGGGACIT | | GGACTTTGTA | | TTTTACTTAC | | GTTAACAACA | | ACAATTGAAC | | AAATAACGTC | | GAATATTACC | | AATGTTTATT | | TCGTTATTCGT |
| 5860 | TCACAAATTT | 5870 | CACAAATAAA | 5880 | GCATTTTTTT | 5890 | CACATGCATC | 5900 | TAGTTGTGGT | 5910 | TTGTCCAAAC | 5920 | TCATCAATGT | 5930 | ATCTTATCAT | 5940 | GTCTGGATCG |
| | AGTGTTTAAA | | GTGTTTAAAT | | CGTAAAAAAA | | GTGACGTAAG | | ATCAACACCA | | AACAGGTTTG | | AGTAGTTTACA | | TAGAATAGTA | | CAGACCTAGC |
| 5950 | GCTGGATGAT | 5960 | CTCCAGCGC | 5970 | GGGATCTCA | 5980 | TGCTGGAGTT | 5990 | CTTCGCCAC | 6000 | CCCAACTTGT | 6010 | TTATTGCAGC | 6020 | TTATAATGGT | 6030 | TACAAATAAA |
| | CGACCTACTA | | GGAGGTGGCG | | CCCCTAGAGT | | ACGACCTCAA | | GAAGCGGGTG | | GGGTTGAACA | | AATAACGTCG | | AATATTACCA | | ATGTTTATTT |
| 6040 | GCAATPAGCAT | 6050 | CACAAATTC | 6060 | ACAAATAAAG | 6070 | CATTTTTTTC | 6080 | ACTGCATCT | 6090 | AGTTGTGGTT | 6100 | TGTCCAAAC | 6110 | CATCAATGTA | 6120 | TCCTTATCATG |
| | CGTTATCGTA | | GTGTTTAAAG | | TGTTTATTTC | | GTAAAAAAAG | | TGACGTAAGA | | TCAACACCAA | | ACAGGTTTGA | | GTAGTTTACAT | | AGAAATAGTAC |
| 6130 | TCGTATATCC | 6140 | GTGACCTCT | 6150 | AGCTAGAGCT | 6160 | TGGCGTAATC | 6170 | ATGGTTCATAG | 6180 | CTGTTTCCCTG | 6190 | TGTGAAATG | 6200 | TTATCCGCTC | 6210 | ACAATTCCAC |
| | AGACATATGG | | CAGCTGGAGA | | TCCATCTCGA | | ACCGCATTAG | | TACCAGTATC | | GACAAAGGAC | | ACACTTTAAC | | AATAGGCGAG | | TGTTAAGGTG |
| 6220 | ACAACATACG | 6230 | AGCCGGAAGC | 6240 | ATAAAGTGTA | 6250 | AAGCCTGGGG | 6260 | TGCCCTAATGA | 6270 | GTGAGCTAAC | 6280 | TCACATTAAT | 6290 | TGCGTTGCGC | 6300 | TCACTGCCCG |
| | TGTTGTATGC | | TCGGCCTTCG | | TATTTTCACAT | | TTCCGACCCC | | ACGGATTACT | | CACCTCGATTG | | AGTGTAATTA | | ACCGAACCGG | | AGTGACGGGC |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | |
|------------|------------|------------|-------------|------------|--------------|-------------|-------------|-------------|
| 6310 | 6320 | 6330 | 6340 | 6350 | 6360 | 6370 | 6380 | 6390 |
| CTTTCCAGTC | GGGAAACCTG | TCGTGCCAGC | TGCATTAAATG | AATCGGCCAA | CGCGCGGGGA | GAGGCGGTTT | CGGTATTGGG | CGCTCTTCCG |
| GAAAGGTGAG | CCCTTTGGAC | AGCACGGTCG | ACGTAATTAC | TTAGCCGGTT | GC CGCGCCCTT | CTCCGCCCAA | CGCATAAACC | CGGAGAAGGC |
| 6400 | 6410 | 6420 | 6430 | 6440 | 6450 | 6460 | 6470 | 6480 |
| CTTCTCGCT | CACTGACTCG | CTGCGCTCGG | TCGTTCGGCT | CGGGCGAGCG | GTATCAGCTC | ACTCAAAGGC | GGTAATACGG | TTATCCACAG |
| GAAGGAGCGA | GTGACTGAGC | GACGCGAGCC | AGCAAGCCGA | CGCCGCTCGC | CATAGTCGAG | TGAGTTTCCG | CCATTATGCC | AATAGGTGTC |
| 6490 | 6500 | 6510 | 6520 | 6530 | 6540 | 6550 | 6560 | 6570 |
| AATCAGGGGA | TAACGCAGGA | AAGAACATGT | GAGCAAAAGG | CCAGCAAAAG | GCCAGGAACC | GTA AAAAGGC | CGCGTTGCTG | CGGTTTTC |
| TTAGTCCCTT | ATTGCGTCTT | TTCTTGATCA | CTCGTTTTC | GGTCTGTTTC | CGGTCTTGG | CATTTTCCG | GGCAACGAC | CGCAAAAAGG |
| 6580 | 6590 | 6600 | 6610 | 6620 | 6630 | 6640 | 6650 | 6660 |
| ATAGGCTCCG | CCCCCTGAC | GAGCATCACA | AAATCGACG | CTCAAGTCAG | AGGTGGCGAA | ACCCGACAGG | ACTATAAAGA | TACCAGGCGT |
| TATCCGAGGC | GGGGGACTG | CTCGTAGTGT | TTTTAGCTGC | GAGTTCAGTC | TCCACCGCTT | TGGGCTGTCC | TGATATTCT | ATGGTCCGCA |
| 6670 | 6680 | 6690 | 6700 | 6710 | 6720 | 6730 | 6740 | 6750 |
| TTCCCCCTGG | AAGCTCCCTC | GTGCGCTCTC | CTGTTCGAC | CCTGCCGCTT | ACCGGATACC | TGTCCGCTTT | TCCTCCCTCG | GGAAGCGTGG |
| AAGGGGACC | TTGAGGGGAG | CACGCGAGAG | GACAAGGCTG | GGACGGCGAA | TGGCCTATGG | ACAGGCGGAA | AGAGGGAGC | CCTTCGCACC |
| 6760 | 6770 | 6780 | 6790 | 6800 | 6810 | 6820 | 6830 | 6840 |
| CGCTTTCTCA | ATGCTCACGC | TGTAGGTATC | TCAGTTCGGT | GTAGGTCGTT | CGCTCCAAGC | TGGGCTGTGT | GCACGAACCC | CCCCTTCAGC |
| GCGAAAGAGT | TACGAGTGG | ACATCCATAG | AGTCAAGCCA | CATCCAGCAA | GCGAGGTTTC | ACCCGACACA | CGTGCTTGGG | GGGCAAGTCG |
| 6850 | 6860 | 6870 | 6880 | 6890 | 6900 | 6910 | 6920 | 6930 |
| CCGACCGCTG | CGCCTTATCC | GGTAACATC | GTCTTGAGTC | CAACCCGGTA | AGACACGACT | TATCGCCACT | GGCAGCAGCC | ACTGGTAACA |
| GGCTGGCGAC | GCGGAATAGG | CCATTGATAG | CAGNACTCAG | GTTGGGCCAT | TCTGTGCTGA | ATAGCGGTGA | CCGTCGTCGG | TGACCATTTGT |
| 6940 | 6950 | 6960 | 6970 | 6980 | 6990 | 7000 | 7010 | 7020 |
| GGATTAGCAG | AGCGAGGTAT | GTAGGCGGTG | CTACAGAGTT | CTTGAAGTGG | TGGCCTAACT | ACGGCTACAC | TAGAAGGACA | GTATTTGGTA |
| CCTAATCGTC | TCGCTCCATA | CATCCGCCAC | GATGTCCTCA | GAACCTCACC | ACCGGATTGA | TGCCGATGTG | ATCTTCTCTGT | CATAAACCAT |
| 7030 | 7040 | 7050 | 7060 | 7070 | 7080 | 7090 | 7100 | 7110 |
| TCTGCGCTCT | GCTGAAGCCA | GTTACCTTCG | GAAAAAGAGT | TGGTAGCTCT | TGATCCGGCA | AACAAACCAC | CGCTGGTAGC | GGTGGTTTTT |
| AGACGCGAGA | CGACTTCGGT | CAATGGAAGC | CTTTTCTCTCA | ACCATCGAGA | ACTAGGCCGT | TTGTTTGGTG | CGGACCATCG | CCACCAAAA |
| 7120 | 7130 | 7140 | 7150 | 7160 | 7170 | 7180 | 7190 | 7200 |
| TTGTTTGGAA | GCAGCAGATT | ACGCGCAGAA | AAAAAGGATC | TCAAGAAGAT | CCTTTGATCT | TTTCTACGGG | GTCTGACGCT | CAGTGAACG |
| AACAAACGTT | CGTCGTCTAA | TGCGCGTCTT | TTTTTCTCTAG | AGTTCTTCTA | GGAAACTAGA | AAAGATGCC | CAGACTGCGA | GTCACCTTGC |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | |
|-------------|------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|
| 7210 | 7220 | 7230 | 7240 | 7250 | 7260 | 7270 | 7280 | 7290 |
| AAAACACAG | TTAAGGAT | TTGGTCATGA | GATTATCAA | AAGGATCTTC | ACCTAGATCC | TTTTAAATTA | AAAATGAAGT | TTTAATCAA |
| TTTTGAGTC | AATCCCTAA | AACCACTACT | CTAATAGTTT | TTCTAGAG | TGGATCTAGG | AAAATTTAAT | TTTTACTTCA | AAATTTAGTT |
| 7300 | 7310 | 7320 | 7330 | 7340 | 7350 | 7360 | 7370 | 7380 |
| TCATAAGAT | ATATGAGTAA | ACTTGGTCTG | ACAGTTACCA | ATGCTTAATC | AGTGAGGCAC | CTATCTCAGC | GATCTGTCTA | TTTCGTTTCA |
| AGATTTTCATA | TATACTCAT | TGAACACAGAC | TGTCAATGGT | TACGAATTAG | TCACCTCCGTG | GATAGAGTCG | CTAGACAGAT | AAAGCAAGTA |
| 7390 | 7400 | 7410 | 7420 | 7430 | 7440 | 7450 | 7460 | 7470 |
| CCATAGTTGC | CTGACTCCCC | GTCGTGTAGA | TAACACTAGAT | ACGGGAGGGC | TTACCATCTG | GCCCCAGTGC | TGCAATGATA | CCGCGAGACC |
| GGTATCAACG | GACTGAGGG | CAGCACATCT | ATTGATGCTA | TGCCCTCCCG | AATGGTAGAC | CGGGGTACAG | ACGTTACTAT | GGCGCTCTGG |
| 7480 | 7490 | 7500 | 7510 | 7520 | 7530 | 7540 | 7550 | 7560 |
| CACGCTCAC | GGCTCCAGAT | TTATCAGCAA | TAAACACAGC | AGCCGGAAGG | GCCGAGCGCA | GAAAGTGTCC | TGCAACTTTA | TCCGCCCTCCA |
| GTGCGAGTGG | CCGAGGTCTA | AATAGTCGTT | ATTGTGTCGG | TCGGCCCTCC | CGGCTCGCGT | CTTCACACAG | ACGTTGAAAT | AGGCGGAGGT |
| 7570 | 7580 | 7590 | 7600 | 7610 | 7620 | 7630 | 7640 | 7650 |
| TCCAGTCTAT | TAATTGTTGC | CGGGAAGCTA | GAGTAAAGTAG | TTGCGCCAGTT | AATAGTTTGC | GCAACGTTGT | TGCCATTGCT | ACAGGCATCG |
| AGGTCAGATA | ATTAACAACG | GCCCTTCGAT | CTCATTTTCATC | AAGCGGTCAA | TTATCAAAACG | CGTTGCAACA | ACGGTAACGA | TGTCCGTAGC |
| 7660 | 7670 | 7680 | 7690 | 7700 | 7710 | 7720 | 7730 | 7740 |
| TGGTGTACG | CTCGTCTGTT | GGTATGCTT | CATTACGCTC | CGGTTCCCAA | CGATCAAGGC | GAGTTACATG | ATCCCCCATG | TTGTGCAAAA |
| ACCACAGTGC | GAGCAGCAA | CCATACCGAA | GTAAGTCGAG | GCCAAGGGTT | GCTAGTTCCG | CTCAATGTAC | TAGGGGGTAC | AACACGTTTT |
| 7750 | 7760 | 7770 | 7780 | 7790 | 7800 | 7810 | 7820 | 7830 |
| AAGCGGTTAG | CTCCTTCGGT | CCTCCGATCG | TTGTACAGAG | TAAGTTGGCC | GCAGTGTAT | CACATCATGGT | TATGGCAGCA | CTGCATAATT |
| TTCCGCCAATC | GAGGAAGCCA | GGAGGCTAGC | AACAGTCTTC | ATTCAACCCG | CGTCAACAATA | GTGAGTACCA | ATACCGTCGT | GACGTATTAA |
| 7840 | 7850 | 7860 | 7870 | 7880 | 7890 | 7900 | 7910 | 7920 |
| CTCTTACTGT | CATGCCATCC | GTAAGATGCT | TTTCTGTGAC | TGGTGTGATC | TCAACCAAGT | CATTCTGAGA | ATAGTGTATG | CGGCGACCGA |
| GAGAAATGACA | GTACGGTAGG | CATTCTACGA | AAAGACACTG | ACCACTCATG | AGTTGGTTCA | GTAAGACTCT | TATCACATAC | GCCGCTGGCT |
| 7930 | 7940 | 7950 | 7960 | 7970 | 7980 | 7990 | 8000 | 8010 |
| GTTGCTCTTG | CCCGGGGTCA | ATACGGGATA | ATACCGCGCC | ACATPAGCAGA | ACTTTAAAG | TGCTCATCAT | TGGAACACGT | TCCTCGGGGC |
| CAACGAGAAC | GGGCGGCAGT | TATGCCCTAT | TATGGCGCGG | TGTATCTCT | TGAAATTTTC | ACGAGTAGTA | ACCTTTTGCA | AGAAAGCCCCG |
| 8020 | 8030 | 8040 | 8050 | 8060 | 8070 | 8080 | 8090 | 8100 |
| GAAACTCTC | AAGGATCTTA | CCGCTGTGTA | GATCCAGTTC | GATGTAAACC | ACTCGTGCAC | CCAACTGATC | TTTCAGCATCT | TTTACTTTCA |
| CTTTTGAGAG | TTCCCTAGAT | GSCGACAACT | CTAGGTCAAG | CTACATTGGG | TGAGCACGTG | GCTTGACTAG | AAGTCGTAGA | AAATGAAAGT |

Figure 14
(continued)

pD17-cJ-dCH2.H1

| | | | | | | | | |
|------------|------------|------------|------------|------------|------------|------------|-------------|------------|
| 8110 | 8120 | 8130 | 8140 | 8150 | 8160 | 8170 | 8180 | 8190 |
| CCAGCGTTTC | TGGGTGAGCA | AAAACAGGAA | GGCAAAATGC | CGCAAAAAAG | GGATAAAGG | CGACACGGAA | ATGTTGAATA | CTCATACTCT |
| GGTCGCAAAG | ACCCACTCGT | TTTTGTCTCT | CCGTTTACG | CGGTTTTC | CCTTATCCC | GCTGTGCCCT | TACAACCTTAT | GAGTATGAGA |
| 8200 | 8210 | 8220 | 8230 | 8240 | 8250 | 8260 | 8270 | 8280 |
| TCCTTTTTC | ATATTATTGA | AGCATTATC | AGGGTTATG | TCTCATGAGC | GGATACATAT | TTGAATGTAT | TTAGAAAAAT | AAACAAATAG |
| AGGAAAAAGT | TATAATAACT | TCGTAATAG | TCCCAATAAC | AGAGTACTCG | CCTATGTATA | AACTTACATA | AATCTTTTAA | TTTGTTTATC |
| 8290 | 8300 | 8310 | 8320 | 8330 | | | | |
| GGGTTCGCG | CACATTCCC | CGAAAAGTGC | CACCTGACGT | C | | | | |
| CCCAAGGCGC | GTGTAAGGG | GCTTTTCACG | GTGGACTGCA | G | | | | |

Figure 14
(continued)

Comparison of whole chiBR96 and deleted CH2 chiBR96 on Ley/K ELISA

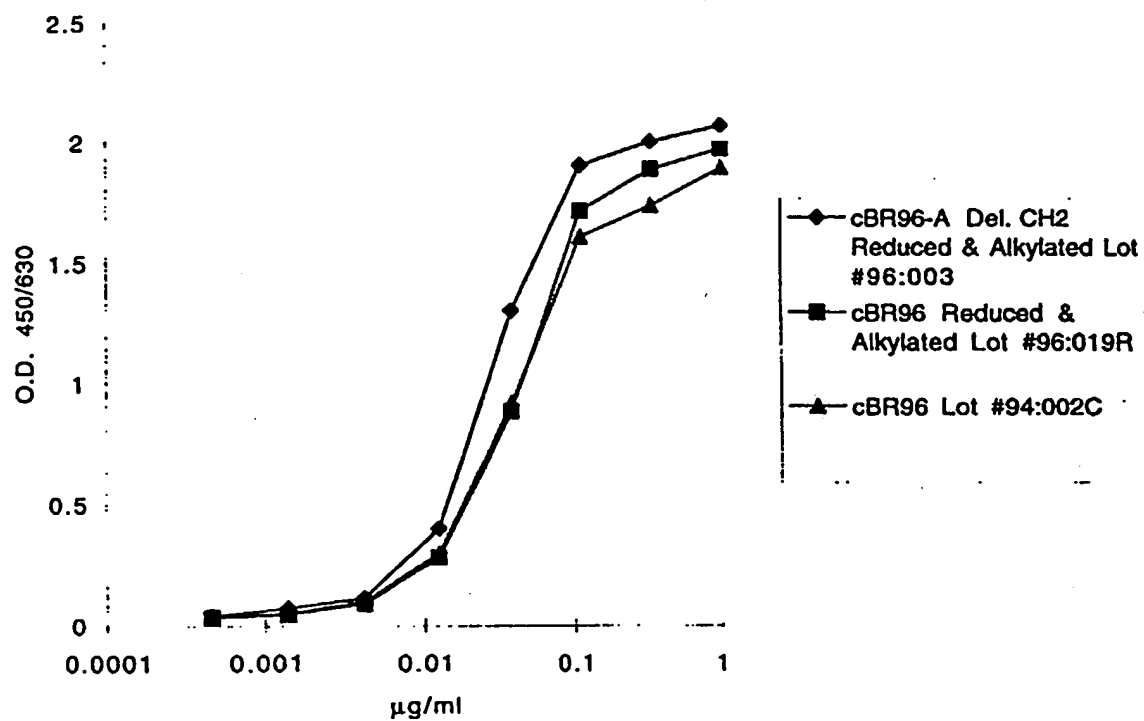


Figure 15

hBR96-2B: L235 to A235 and G237 to A237

hBR96-2C: E318 to S318, K320 to S320, and K322 to S322

hBR96-2D: P331 to A331

hBR96-2E: L235 to A235, G237 to A237, E318 to S318, K320 to S320, and K322 to S322

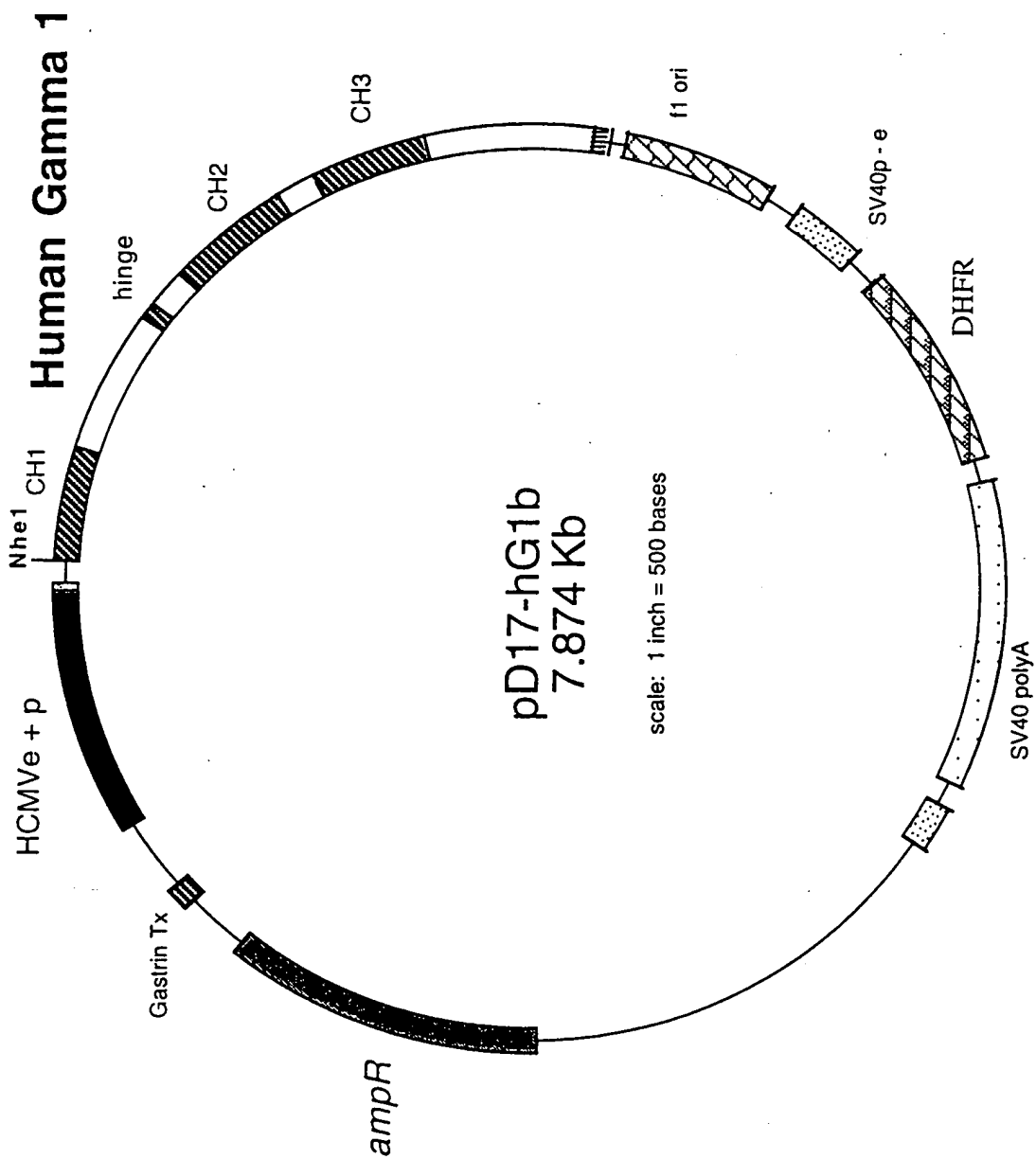
hBR96-2F: L235 to A235, G237 to A237, and P331 to A331

hBR96-2G: E318 to S318, K320 to S320, K322 to S322, and P331 to A331

hBR96-2H: L235 to A235, G237 to A237, E318 to S318, K320 to S320, K322 to S322, and P331 to A331

08905293 080197
267080 26250680

Figure 16



1351 TCAGCACCTG AACT²³⁵~~CTG~~GG ²³⁷GGGACCGTCA GTCTTCCTCT TCCCCCAAA

1401 ACCCAAGGAC ACCCTCATGA TCTCCCGGAC CCCTGAGGTC ACATGCGTGG

1451 TGGTGGACGT GAGCCACGAA GACCCTGAGG TCAAGTTCAA CTGGTACGTG

1501 GACGGCGTGG AGGTGCATAA TGCCAAGACA AAGCCGCGGG AGGAGCAGTA

1551 CAACAGCACG TACCGTGTGG TCAGCGTCCT CACCGTCCTG CACCAGGACT

1601 GGCTGAATGG CAAG³¹⁸~~GAG~~TAC ³²⁰~~AAG~~TG³²²~~AGG~~ TCTCCAACAA AGCCCTCCCA

1651 ³³¹GCC~~CCC~~ATCG AGAAAACCAT CTCCAAAGCC AAAGGTGGGA CCCGTGGGGT

1701 GCGAGGGCCA CATGGACAGA GGCCGGCTCG GCCCACCTC TGCCCTGAGA

1751 GTGACCGCTG TACCAACCTC TGTCCCTACA GGGCAGCCCC GAGAACCACA

1801 GGTGTACACC CTGCCCCCAT CCCGGGATGA GCTGACCAAG AACCAGGTCA

1851 GCCTGACCTG CCTGGTCAAA GGCTTCTATC CCAGCGACAT CGCCGTGGAG

1901 TGGGAGAGCA ATGGGCAGCC GGAGAACAAC TACAAGACCA CGCCTCCCGT

1951 GCTGGACTCC GACGGCTCCT TCTTCCTCTA CAGCAAGCTC ACCGTGGACA

2001 AGAGCAGGTG GCAGCAGGGG AACGTCTTCT CATGCTCCGT GATGCATGAG

2051 GCTCTGCACA ACCACTACAC GCAGAAGAGC CTCTCCCTGT CTCCGGGTAA

2101 ATGAGTGCGA CGGCCGGCAA GCCCCGCTC CCCGGGCTCT CGCGGTCGCA

2151 CGAGGATGCT TGGCACGTAC CCCCTGTACA TACTTCCCGG GCGCCCAGCA

2201 TGGAAATAAA GCACCCAGCG CTGCCCTGGG CCCCTGCGAG ACTGTGATGG

2251 TTCTTTCCAC GGGTCAGGCC GAGTCTGAGG CCTGAGTGGC ATGAGGGAGG

2301 CAGAGCGGGT CCCACTGTCC CCACACTGGC CCAGGCTGTG CAGGTGTGCC

2351 TGGGCCCCCT AGGGTGGGGC TCAGCCAGGG GCTGCCCTCG GCAGGGTGGG

2401 GGATTTGCCA GCGTGGCCCT CCCTCCAGCA GCACCTGCCC TGGGCTGGGC

2451 CACGGGAAGC CCTAGGAGCC CCTGGGGACA GACACACAGC CCCTGCCTCT

2501 GTAGGAGACT GTCCTGTTCT GTGAGCGCCC CTGTCCTCCC GACCTCCATG

2551 CCCACTCGGG GGCATGCCTA GTCCATGTGC GTAGGGACAG GCCCTCCCTC

2601 ACCCATCTAC CCCCACGGCA CTAACCCCTG GCTGCCCTGC CCAGCCTCGC

2651 ACCCGCATGG GGACACAACC GACTCCGGGG ACATGCACTC TCGGGCCCTG

2701 TGGAGGGACT GGTGCAGATG CCCACACACA CACTCAGCCC AGACCCGTTC

2751 AACAAACCCC GCACTGAGGT TGGCCGGCCA CACGGCCACC ACACACACAC

2801 GTGCACGCCT CACACACGGA GCCTCACCCG GGCGAACTGC ACAGCACCCA

FIGURE 18B

2851 GACCAGAGCA AGGTCCTCGC ACACGTGAAC ACTCCTCGGA CACAGGCCCC
 2901 CACGAGCCCC ACGCGGCACC TCAAGGCCCA CGAGCCTCTC GGCAGCTTCT
 2951 CCACATGCTG ACCTGCTCAG ACAAACCCAG CCCTCCTCTC ACAAGGGTGC
 3001 CCCTGCAGCC GCCACACACA CACAGGGGAT CACACACCAC GTCACGTCCC
 3051 TGGCCCTGGC CCACTTCCCA GTGCCGCCCT TCCCTGCAGG ACGGATCAGC
 3101 CTCGACTGTG CCTTCTAGTT GCCAGCCATC TGTTGTTTGC CCCTCCCCCG
 3151 TGCCTTCCTT GACCCTGGAA GGTGCCACTC CCACTGTCCT TTCCTAATAA
 3201 AATGAGGAAA TTGCATCGCA TTGTCTGAGT AGGTGTCATT CTATTCTGGG
 3251 GGGTGGGGTG GGGCAGGACA GCAAGGGGGA GGATTGGGAA GACAATAGCA
 3301 GGCATGCTGG GGATGCGGTG GGCTCTATGG CTTCTGAGGC GGAAAGAACC
 3351 AGCTGGGGCT CTAGGGGGTA TCCCCACGCG CCCTGTAGCG GCGCATTAAG
 3401 CGCGGCGGGT GTGGTGGTTA CGCGCAGCGT GACCGCTACA CTTGCCAGCG
 3451 CCCTAGCGCC CGCTCCTTTC GCTTTCTTCC CTTCTTTTCT CGCCACGTTC
 3501 GCCGGGCCCTC TCAAAAAGG GAAAAAAGC ATGCATCTCA ATTAGTCAGC
 3551 AACCATAGTC CCGCCCCCTAA CTCCGCCCCAT CCCGCCCCCTA ACTCCGCCCCA
 3601 GTTCCGCCCC TTCTCCGCCC CATGGCTGAC TAATTTTTTT TATTTATGCA
 3651 GAGGCCGAGG CCGCCTCGGC CTCTGAGCTA TTCCAGAAGT AGTGAGGAGG
 3701 CTTTTTTTGA GGCCTAGGCT TTTGCAAAAA GCTTGGACAG CTCAGGGCTG
 3751 CGATTTTCGG CCAAACCTGA CGGCAATCCT AGCGTGAAGG CTGGTAGGAT
 3801 TTTATCCCCG CTGCCATCAT GGTTGACCA TTGAACTGCA TCGTCGCCGT
 3851 GTCCCAAAAT ATGGGGATTG GCAAGAACGG AGACCTACCC TGGCCTCCGC
 3901 TCAGGAACGA GTTCAAGTAC TTCAAAGAA TGACCACAAC CTCTTCAGTG
 3951 GAAGGTAAAC AGAATCTGGT GATTATGGGT AGGAAAACCT GGTTCCTCCAT
 4001 TCCTGAGAAG AATCGACCTT TAAAGGACAG AATTAATATA GTTCTCAGTA
 4051 GAGAACTCAA AGAACCACCA CGAGGAGCTC ATTTTCTTGC CAAAAGTTTG
 4101 GATGATGCCT TAAGACTTAT TGAACAACCG GAATTGGCAA GTAAAGTAGA
 4151 CATGGTTTGG ATAGTCGGAG GCAGTTCTGT TTACCAGGAA GCCATGAATC
 4201 AACCAGGCCA CCTTAGACTC TTTGTGACAA GGATCATGCA GGAATTTGAA
 4251 AGTGACACGT TTTTCCCAGA AATTGATTTG GGGAAATATA AACTTCTCCC
 4301 AGAATACCCA GCGTCCTCT CTGAGGTCCA GGAGGAAAAA GGCATCAAGT

FIGURE 18C

4351 ATAAGTTTGA AGTCTACGAG AAGAAAGACT AACAGGAAGA TGCTTTCAAG
 4401 TTCTCTGCTC CCCTCCTAAA GCTATGCATT TTTATAAGAC CATGGGACTT
 4451 TTGCTGGCTT TAGATCTCTT TGTGAAGGAA CCTTACTTCT GTGGTGTGAC
 4501 ATAATTGGAC AAACCTACCTA CAGAGATTTA AAGCTCTAAG GTAAATATAA
 4551 AATTTTTTAAG TGTATAATGT GTTAAACTAC TGATTCTAAT TGTTTGTGTA
 4601 TTTTAGATTC CAACCTATGG AACTGATGAA TGGGAGCAGT GGTGGAATGC
 4651 CTTTAATGAG GAAAACCTGT TTTGCTCAGA AGAAATGCCA TCTAGTGATG
 4701 ATGAGGCTAC TGCTGACTCT CAACATTCTA CTCCTCCAAA AAAGAAGAGA
 4751 AAGGTAGAAG ACCCCAAGGA CTTTCCTTCA GAATTGCTAA GTTTTTTGAG
 4801 TCATGCTGTG TTTAGTAATA GAACTCTTGC TTGCTTTGCT ATTTACACCA
 4851 CAAAGGAAAA AGCTGCACTG CTATACAAGA AAATTATGGA AAAATATTCT
 4901 GTAACCTTTA TAAGTAGGCA TAACAGTTAT AATCATAACA TACTGTTTTT
 4951 TCTTACTCCA CACAGGCATA GAGTGTCTGC TATTAATAAC TATGCTCAAA
 5001 AATTGTGTAC CTTTAGCTTT TTAATTTGTA AAGGGGTAA TAAGGAATAT
 5051 TTGATGTATA GTGCCTTGAC TAGAGATCAT AATCAGCCAT ACCACATTTG
 5101 TAGAGGTTTT ACTTGCTTTA AAAAACCTCC CACACCTCCC CCTGAACCTG
 5151 AACATAAAA TGAATGCAAT TGTGTGTGTT AACTTGTTTA TTGCAGCTTA
 5201 TAATGGTTAC AAATAAAGCA ATAGCATCAC AAATTTTACA AATAAAGCAT
 5251 TTTTTTCACT GCATTCTAGT TGTGGTTTGT CCAAACCAT CAATGTATCT
 5301 TATCATGTCT GGATCGGCTG GATGATCCTC CAGCGCGGGG ATCTCATGCT
 5351 GGAGTTCTTC GCCCACCCCA ACTTGTTTAT TGCAGCTTAT AATGGTTACA
 5401 AATAAAGCAA TAGCATCACA AATTTTACAA ATAAAGCATT TTTTTCACTG
 5451 CATTCTAGTT GTGGTTTGTC CAAACTCATC AATGTATCTT ATCATGTCTG
 5501 TATACCGTCG ACCTCTAGCT AGAGCTTGGC GTAATCATGG TCATAGCTGT
 5551 TTCCTGTGTG AAATTGTTAT CCGCTCACAA TTCCACACAA CATACGAGCC
 5601 GGAAGCATAA AGTGTAAGC CTGGGGTGCC TAATGAGTGA GCTAACTCAC
 5651 ATTAATTGCG TTGCGCTCAC TGCCCGCTTT CCAGTCGGGA AACCTGTCGT
 5701 GCCAGCTSCA TTAATGAATC GGCCAACGCG CGGGGAGAGG CGGTTTTCGT
 5751 ATTGGGCGCT CTTCCGCTTC CTCGCTCACT GACTCGCTGC GCTCGGTCGT
 5801 TCGGCTGCGG CGAGCGGTAT CAGCTCACTC AAAGGCGGTA ATACGGTTAT

FIGURE 18D

5351 CCACAGAATC AGGGGATAAC GCAGGAAAGA ACATGTGAGC AAAAGGCCAG
 5901 CAAAAGGCCA GGAACCGTAA AAAGGCCGCG TTGCTGGCGT TTTTCCATAG
 5951 GCTCCGCCCC CCTGACGAGC ATCACAAAAA TCGACGCTCA AGTCAGAGGT
 6001 GGCGAAACCC GACAGGACTA TAAAGATACC AGGCGTTTCC CCCTGGAAGC
 6051 TCCCTCGTGC GCTCTCCTGT TCCGACCCTG CCGCTTACCG GATACCTGTC
 6101 CGCCTTTCTC CCTTCGGGAA GCGTGCGCT TTCTCAATGC TCACGCTGTA
 6151 GGTATCTCAG TTEGGTGTAG GTCGTTGCT CCAAGCTGGG CTGTGTGCAC
 6201 GAACCCCCCG TTCAGCCCGA CCGCTGCGCC TTATCCGGTA ACTATCGTCT
 6251 TGAGTCCAAC CCGGTAAGAC ACGACTTATC GCCACTGGCA GCAGCCACTG
 6301 GTAACAGGAT TAGCAGAGCG AGGTATGTAG GCGGTGCTAC AGAGTTCTTG
 6351 AAGTGGTGGC CTAACTACGG CTACACTAGA AGGACAGTAT TTGGTATCTG
 6401 CGCTCTGCTG AAGCCAGTTA CCTTCGGAAA AAGAGTTGGT AGCTCTTGAT
 6451 CCGGCAAACA AACCACCGCT GGTAGCGGTG GTTTTTTTGT TTGCAAGCAG
 6501 CAGATTACGC GCAGAAAAAA AGGATCTCAA GAAGATCCTT TGATCTTTTC
 6551 TACGGGGTCT GACGCTCAGT GGAACGAAAA CTCACGTAA GGGATTTTGG
 6601 TCATGAGATT ATCAAAAAGG ATCTTCACCT AGATCCTTTT AAATTAAAAA
 6651 TGAAGTTTTA AATCAATCTA AAGTATATAT GAGTAAACTT GGTCTGACAG
 6701 TTACCAATGC TTAATCAGTG AGGCACCTAT CTCAGCGATC TGTCTATTTT
 6751 GTTCATCCAT AGTTGCCTGA CTCCCCGTCTG TGTAGATAAC TACGATACGG
 6801 GAGGGCTTAC CATCTGGCCC CAGTGCTGCA ATGATACCGC GAGACCCACG
 6851 CTCACCGGCT CCAGATTTAT CAGCAATAAA CCAGCCAGCC GGAAGGGCCG
 6901 AGCGCAGAAG TGGTCCTGCA ACTTTATCCG CCTCCATCCA GTCTATTAAT
 6951 TGTTGCCGGG AAGCTAGAGT AAGTAGTTCG CCAGTTAATA GTTTGCGCAA
 7001 CGTTGTTGCC ATTGCTACAG GCATCGTGGT GTCACGCTCG TCGTTTGGTA
 7051 TGGCTTCATT CAGCTCCGGT TCCCAACGAT CAAGGCGAGT TACATGATCC
 7101 CCCATGTTGT GCAAAAAAGC GGTTAGCTCC TTCGGTCCTC CGATCGTTGT
 7151 CAGAAGTAAG TTGGCCGCAG TGTTATCACT CATGGTTATG GCAGCACTGC
 7201 ATAATTCTCT TACTGTCATG CCATCCGTAA GATGCTTTTC TGTGACTGGT
 7251 GAGTACTCAA CCAAGTCATT CTGAGAATAG TGTATGCGGC GACCGAGTTG
 7301 CTCTTGCCCC GCGTCAATAC GGGATAATAC CGCGCCACAT AGCAGAACTT

FIGURE 18E

08905293-080197

7351 TAAAAGTGCT CATCATTGGA AAACGTTCTT CGGGGCGAAA ACTCTCAAGG
7401 ATCTTACCGC TGTTGAGATC CAGTTCGATG TAACCCACTC GTGCACCCAA
7451 CTGATCTTCA GCATCTTTTA CTTTCACCAG CGTTTCTGGG TGAGCAAAAA
7501 CAGGAAGGCA AAATGCCGCA AAAAAGGGAA TAAGGGCGAC ACGGAAATGT
7551 TGAATACTCA TACTCTTCCT TTTTCAATAT TATTGAAGCA TTTATCAGGG
7601 TTATTGTCTC ATGAGCGGAT ACATATTTGA ATGTATTTAG AAAAATAAAC
7651 AAATAGGGGT TCCGCGCACA TTTCCCCGAA AAGTGCCACC TGACGTCGAC
7701 GGATCGGGAG ATCTGCTAGG TGACCTGAGG CGCGCCGGCT TCGAATAGCC
7751 AGAGTAACCT TTTTTTTTAA TTTTATTTTA TTTTATTTTT GAGATGGAGT
7801 TTGGCGCCGA TCTCCCGATC CCCTATGGTC GACTCTCAGT ACAATCTGCT
7851 CTGATGCCGC ATAGTTAAGC CAGTATCTGC TCCCTGCTTG TGTGTTGGAG
7901 GTCGCTGAGT AGTGCGCGAG CAAAATTTAA GCTACAACAA GGCAAGGCTT
7951 GACCGACAAT TGCATGAAGA ATCTGCTTAG GGTTAGGCGT TTTGCGCTGC
8001 TTCGCGATGT ACGGGCCAGA TATACGCGTT GACATTGATT ATTGACTAGT
8051 TATTAATAGT AATCAATTAC GGGGTCATTA GTTCATAGCC CATATATGGA
8101 GTTCCGCGTT ACATAACTTA CGGTAAATGG CCCGCCTGGC TGACCGCCCA
8151 ACGACCCCCG CCCATTGACG TCAATAATGA CGTATGTTCC CATAGTAACG
8201 CCAATAGGGA CTTTCCATTG ACGTCAATGG GTGGACTATT TACGGTAAAC
8251 TGCCCACTTG GCAGTACATC AAGTGTATCA TATGCCAAGT ACGCCCCCTA
8301 TTGACGTCAA TGACGGTAAA TGGCCCGCCT GGCATTATGC CCAGTACATG
8351 ACCTTATGGG ACTTTCCTAC TTGGCAGTAC ATCTACGTAT TAGTCATCGC
8401 TATTACCATG GTGATGCGGT TTTGGCAGTA CATCAATGGG CGTGGATAGC
8451 GGTTTGACTC ACGGGGATTT CCAAGTCTCC ACCCCATTGA CGTCAATGGG
8501 AGTTTGTTTT GGCACCAAAA TCAACGGGAC TTTCCAAAAT GTCGTAACAA
8551 CTCCGCCCCA TTGACGCAAA TGGGCGGTAG GCGTGTACGG TGGGAGGTCT
8601 ATATAAGCAG AGCTCTCTGG CTAAGTAGAG AACCCACTGC TTACTGGCTT
8651 ATCGAAATTA ATACGACTCA CTATAGGGAG ACCCAAGCTT

FIGURE 18F

FIGURE 19 A

pD17-hG1b

| | | | | | |
|------------|-------------|-------------|------------|-------------|-------------|
| 10 | 20 | 30 | 40 | 50 | 60 |
| GGTACCAATT | TAAATTGATA | TCTCCTTAGG | TCTCGAGTCT | CTAGATAACC | GGTCAATCGA |
| CCATGGTTAA | ATTTAACTAT | AGAGGAATCC | AGAGCTCAGA | GATCTATTGG | CCAGTTAGCT |
| 70 | 80 | 90 | 100 | 110 | 120 |
| TTTGAATTCT | TGCGGCGGCT | TGCTAGCACC | AAGGGCCCAT | CGGTCTTCCC | CCTGGCACCC |
| AACCTTAAGA | ACGCCGGCGA | ACGATCGTGG | TTCCCCGGTA | GCCAGAAGGG | GGACCGTGGG |
| 130 | 140 | 150 | 160 | 170 | 180 |
| TCCTCCAAGA | GCACCTCTGG | GGGCACAGCG | GCCCTGGGCT | GCCTGGTCAA | GGACTACTTC |
| AGGAGGTTCT | CGTGGAGACC | CCCGTGTCGC | CGGGACCCGA | CGGACCAGTT | CCTGATGAAG |
| 190 | 200 | 210 | 220 | 230 | 240 |
| CCCGAAACCG | TGACGGTGTG | GTGGAACCTCA | GGCGCCCTGA | CCAGCGGCGT | GCACACCTTC |
| GGGCTTGGCC | ACTGCCACAG | CACCTTGAGT | CCGCGGGACT | GGTCGCCGCA | CGTGTGGAAG |
| 250 | 260 | 270 | 280 | 290 | 300 |
| CCGGCTGTCC | TACAGTCCTC | AGGACTCTAC | TCCCTCAGCA | GGTGGTCAC | CGTGCCCTCC |
| GGCCGACAGG | ATGTCAGGAG | TCCTGAGATG | AGGGAGTCGT | CGCACCACTG | GCACGGGAGG |
| 310 | 320 | 330 | 340 | 350 | 360 |
| AGCAGCTTGG | GCACCCAGAC | CTACATCTGC | AACGTGAATC | ACAAGCCCCAG | CAACACCAAG |
| TCGTGCGAAC | CGTGGGTCTG | GATGTAGACG | TTGCACTTAG | TGTTCCGGTC | GT'TGTGGTTC |
| 370 | 380 | 390 | 400 | 410 | 420 |
| GTGGACAAGA | AAGTTGGTGA | GAGGCCAGCA | CAGGGAGGGA | GGGTGTCTGC | TGGAAGCCAG |
| CACCTGTCTT | TTCAACCACT | CTCCGGTCTG | GTCCCTCCCT | CCCACAGACG | ACCTTCGGTC |
| 430 | 440 | 450 | 460 | 470 | 480 |
| GCTCAGCGCT | CCTGCCCTGA | CGCATCCCGG | CTATGCAGCC | CCAGTCCAGG | GCAGCAAGGC |
| CGAGTCGCGA | GGACGGACCT | GCGTAGGGCC | GATACGTCGG | GGTCAGGTCC | CGTCGTTCCG |
| 490 | 500 | 510 | 520 | 530 | 540 |
| AGGCCCCGTC | TGCCCTCTTCA | CCCGGAGGCC | TCTGCCCGCC | CCACTCATGC | TCAGGGAGAG |
| TCCGGGGCAG | ACGGAGAAGT | GGGCCCTCCG | AGACGGGGGG | GGTGAGTACG | AGTCCCTCTC |
| 550 | 560 | 570 | 580 | 590 | 600 |
| GGTCTTCTGG | CTTTTCTCCC | AGGCTCTGGG | CAGGCACAGG | CTAGGTGCCC | CTAACCCAGG |
| CCAGAAGACC | GAAAAAGGGG | TCCGAGACCC | GTCCGTGTCC | GATCCACGGG | GATTGGGTCC |

FIGURE 19B

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 610 | 620 | 630 | 640 | 650 | 660 |
| CCCTGCACAC | AAAGGGGCAG | GTGCTGGGCT | CAGACCTGCC | AAGAGCCATA | TCCGGGGAGGA |
| GGGACGTGTG | TTTCCCCCGTC | CACGACCCGA | GTCTGGACGG | TTCTCGGTAT | AGGCCCTCCT |
| 670 | 680 | 690 | 700 | 710 | 720 |
| CCCTGCCCCCT | GACCTAAGCC | CACCCCAAAG | GCCAAACTCT | CCACTCCCTC | AGCTCGGACA |
| GGGACGGGGA | CTGGATTTCGG | GTGGGGTTTC | CGGTTTGAGA | GGTGAGGGAG | TCGAGCCTGT |
| 730 | 740 | 750 | 760 | 770 | 780 |
| CCTTCTCTCC | TCCCAGATTTC | CAGTAACCTC | CAATCTTCTC | TCTGCAGAGC | CCAAATCTTG |
| GGAAAGAGAG | AGGTCTAAG | GTCAATTGAG | GTTAGAAGAG | AGACGTCTCG | GGTTTAGAAC |
| 790 | 800 | 810 | 820 | 830 | 840 |
| TGACAAAACT | CACACATGCC | CACCGTGCCC | AGGTAAGCCA | GCCCAGGCCCT | CGCCCTCCAG |
| ACTGTTTGA | GTGTGTACGG | GTGGCACGGG | TCCATTCCGT | CGGGTCCGGA | GCGGGAGGTC |
| 850 | 860 | 870 | 880 | 890 | 900 |
| CTCAAGGCGG | GACAGGTGCC | CTAGAGTAGC | CTGCATCCAG | GGACAGGCCC | CAGCCGGGTG |
| GAGTTCGGCC | CTGTCCACGG | GATCTCATCG | GACGTAGGTC | CCTGTCCGGG | GTCGGCCAC |
| 910 | 920 | 930 | 940 | 950 | 960 |
| CTGACACGTC | CACCTCCATC | TCTTCCCTCAG | CACCTGAACCT | CTGTGGGGGA | CCGTCACTCT |
| GACTGTGCAG | GTGGAGGTAG | AGAAGGAGTC | GTGGACTTGA | GACCCCTT | GGCAGTCAGA |
| 970 | 980 | 990 | 1000 | 1010 | 1020 |
| TCCTCTTCCC | CCCAAAACCC | AAGGACACCC | TCATGATCTC | CCGGACCCCT | GAGGTCACAT |
| AGGAGAAGGG | GGGTTTGGG | TTCCCTGTGGG | AGTACTAGAG | GGCCTGGGGA | CTCCAGTGTA |
| 1030 | 1040 | 1050 | 1060 | 1070 | 1080 |
| GGGTGGTGGT | GGACGTGAGC | CACGAAGACC | CTGAGGTCAA | GTTCAACTGG | TACGTGGACG |
| CGCACCAACA | CCTGCACCTG | GTGCTTCTGG | GACTCCAGTT | CAAGTTGACC | ATGCACCTGC |
| 1090 | 1100 | 1110 | 1120 | 1130 | 1140 |
| GGGTGGAGGT | GCATAATGCC | AAGACAAAGC | CGCGGGAGGA | GCAGTACAAC | AGCACGTACC |
| CGCACCTCCA | CGTATTACGG | TTCTGTTTTCG | GCGCCCTCCT | CGTCATGTTG | TCGTGCATGG |
| 1150 | 1160 | 1170 | 1180 | 1190 | 1200 |
| GTGTGGTCAG | CGTCCTCACC | GTCCCTGCACC | AGGACTGGCT | GAATGGCAAG | GAGTACAACT |
| CACACCAGTC | GCAGGAGTGG | CAGGACGTGG | TCCTGACCCA | CTTACCGTTC | CTCATGTTCA |

FIGURE 19D

pD17-hG1b

| | | | | | |
|-------------|------------|-------------|------------|-------------|-------------|
| 1810 | 1820 | 1830 | 1840 | 1850 | 1860 |
| CCTGGGCCCC | TGCGAGACTG | TGATGGTTCT | TTCCACGGGT | CAGGCCGAGT | CTGAGGCCTG |
| GGACCCGGGG | ACGCTCTGAC | ACTACCAAGA | AAGGTGCCCC | GTCCGGCTCA | GA CTCCGGAC |
| 1870 | 1880 | 1890 | 1900 | 1910 | 1920 |
| AGTGGCATGA | GGGAGGCAGA | GCGGGTCCCA | CTGTCCCCAC | ACTGGCCCCAG | GCTGTGCAGG |
| TCACCGTACT | CCCTCCGTCT | CGCCCAAGGT | GACAGGGGTG | TGACCGGGTC | CGACACGTCC |
| 1930 | 1940 | 1950 | 1960 | 1970 | 1980 |
| TGTGCCCTGG | CCCCCTAGGG | TGGGGCTCAG | CCAGGGGCTG | CCCTCGGCAG | GGTGGGGGAT |
| ACACGGACCC | GGGGGATCCC | ACCCCGAGTC | GGTCCCCGAC | GGGAGCCGTC | CCACCCCCCTA |
| 1990 | 2000 | 2010 | 2020 | 2030 | 2040 |
| TTGCCAGCGT | GGCCCTCCCT | CCAGCAGCAC | CTGCCCTGGG | CTGGGCCACG | GGAAGCCCCTA |
| AACGGTCGCA | CCGGGAGGGA | GGTCGTCGTG | GACGGGACCC | GACCCGGTGC | CCTTCGGGGAT |
| 2050 | 2060 | 2070 | 2080 | 2090 | 2100 |
| GGAGCCCCCTG | GGGACAGACA | CACAGCCCCCT | GCCTCTGTAG | GAGACTGTCC | TGTTCTGTGA |
| CCTCGGGGAC | CCCTGTCTGT | GTGTCGGGGA | CGGAGACATC | CTCTGACAGG | ACAAGACACT |
| 2110 | 2120 | 2130 | 2140 | 2150 | 2160 |
| GCGCCCTTGT | CCTCCCGACC | TCCATGCCCA | CTCGGGGGCA | TGCTGGGGAT | GCGGTGGGCT |
| CGCGGGGACA | GGAGGGCTGG | AGGTACGGGT | GAGCCCCCGT | ACGACCCCTA | CGCCACCCGA |
| 2170 | 2180 | 2190 | 2200 | 2210 | 2220 |
| CTATGGCTTC | TGAGGCGGAA | AGAAACAGCT | GGGGCTCTAG | GGGGTATCCC | CACGCGCCCT |
| GATACCGAAG | ACTCCGCCTT | TCTTGGTCGA | CCCCGAGATC | CCCCATAGGG | GTGCCGCGGA |
| 2230 | 2240 | 2250 | 2260 | 2270 | 2280 |
| GTAGCGGCGC | ATTAGCGCG | GCGGGTGTGG | TGGTTACGCG | CAGCGTGACC | GCTACACTTG |
| CATCGCGCGG | TAATTGCGGC | CGCCCCACAC | ACCAATGCGC | GTCGCACCTGG | CGATGTGAAC |
| 2290 | 2300 | 2310 | 2320 | 2330 | 2340 |
| CCAGCGCCCT | AGCGCCCGCT | CCTTTCGCTT | TCCTCCCTTC | CTTTCCTCGCC | ACGTTCCGCCG |
| GGTCGCGGGA | TCGCGGGCGA | GGAAAGCGAA | AGAAAGGAAG | GAAAGAGCGG | TGCAAGCGGC |
| 2350 | 2360 | 2370 | 2380 | 2390 | 2400 |
| GCTTTCGCCG | TCAAGCTCTA | AATCGGGGCA | TCCCTTTAGG | GTTCGGATT | AGTGCCTTAC |
| CGAAAGGGGC | AGTTCGAGAT | TTAGCCCCGT | AGGAAATCC | CAAGGCTAAA | TCACGAAATG |

FIGURE 19C

pD17-hG1b

| | | | | | |
|-------------|------------|-------------|------------|-------------|--------------|
| 322- 1210 | 1220 | 1230 | 1240 | 1250 | 1260 |
| GCAGGTCTC | CAACAAAGCC | CTCCCAGCC | CCATCGAGAA | AACCATCTCC | AAAGCCAAAG |
| CGTCCAGAG | GTGTTTCGG | GAGGTCGGG | GGTAGCTCTT | TTGGTAGAGG | TTTCGGTTTC |
| 1270 | 1280 | 1290 | 1300 | 1310 | 1320 |
| GTGGGACCCG | TGGGGTGCGA | GGCCACATG | GACAGAGGCC | GGCTCGGCC | ACCCTCTGCC |
| CACCCTGGGC | ACCCACGCT | CCCGGTGTAC | CTGTCTCCGG | CCGAGCCGGG | TGGGAGACGG |
| 1330 | 1340 | 1350 | 1360 | 1370 | 1380 |
| CTGAGAGTGA | CCGCTGTACC | AACCTCTGTC | CCTACAGGCC | AGCCCCGAGA | ACCACAGGTG |
| GACTCTCACT | GGCGACATGG | TTGGAGACAG | GGATGTCCCG | TCGGGGCTCT | TGGTGTCCAC |
| 1390 | 1400 | 1410 | 1420 | 1430 | 1440 |
| TACACCCCTGC | CCCCATCCCG | GGATGAGCTG | ACCAAGAACC | AGGTCAGCCT | GACCTGCCTG |
| ATGTGGGACG | GGGTAGGGC | CCTACTCGAC | TGGTCTTTGG | TCCAGTCGGA | CTGGACGGAC |
| 1450 | 1460 | 1470 | 1480 | 1490 | 1500 |
| GTCAAAGGCT | TCTATCCAG | CGACATCGCC | GTGGAGTGGG | AGAGCAATGG | GCAGCCGGAG |
| CAGTTTCCGA | AGATAGGGTC | GCTGTAGCGG | CACCTCACCC | TCTCGTTACC | CGTCGGCCTC |
| 1510 | 1520 | 1530 | 1540 | 1550 | 1560 |
| AACAACATA | AGACCACGCC | TCCCGTGTCTG | GACTCCGACG | GCTCCTTCTT | CCTCTACACG |
| TTGTTGATGT | TCTGGTGCGG | AGGACACGAC | CTGAGGCTGC | CGAGGAAGAA | GGAGATGTCTG |
| 1570 | 1580 | 1590 | 1600 | 1610 | 1620 |
| AAGCTCACCG | TGGACAAGAG | CAGGTGGCAG | CAGGGGAACG | TCTTCTCATG | CTCCGTGATG |
| TTTCGAGTGGC | ACCTGTTCTC | GTCCACCGTC | GTCCCTTTC | AGAAGAGTAC | GAGGCACACTAC |
| 1630 | 1640 | 1650 | 1660 | 1670 | 1680 |
| CATGAGGCTC | TGCACAACCA | CTACACGCAG | AAGAGCCTCT | CCCTGTCTCC | GGTAAATGA |
| GTAATCCGAG | ACGTGTTGGT | GATGTGCGTC | TTCTCGGAGA | GGACACAGAG | CCCATTTACT |
| 1690 | 1700 | 1710 | 1720 | 1730 | 1740 |
| GTGCGACGGC | CGGCAAGCCC | CCGCTCCCCG | GGCTCTCGCG | GTGCGACGAG | GATGCTTGGC |
| CACGCTGCCG | GCCGTTCGGG | GGCGAGGGGC | CCGAGAGCGC | CAGCGTGCTC | CTACGAACCG |
| 1750 | 1760 | 1770 | 1780 | 1790 | 1800 |
| ACGTACCCCC | TGTACATACT | TCCCGGGCGC | CCAGCATGGA | AATAAAGCAC | CCAGCGCTGC |
| TGCATGGGGG | ACATGTATGA | AGGGCCCGCG | GGTCGTACCT | TTATTTCTGTG | GGTCGGCGACG |

FIGURE 19E

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 2410 | 2420 | 2430 | 2440 | 2450 | 2460 |
| GGCACCTCGA | CCCCAAAAA | CTTGATTAGG | GTGATGGTTC | ACGTAAGTGG | CCATCGCCCT |
| CCGTGGAGCT | GGGGTTTTT | GAACTAATCC | CACTACCAAG | TGCATCACCC | GGTAGCGGGA |
| 2470 | 2480 | 2490 | 2500 | 2510 | 2520 |
| GATAGACGGT | TTTTTCGCCCT | TTGACGTTGG | AGTCCACGTT | CTTTAATAGT | GGACTCTTGT |
| CTATCTGCCA | AAAAGCGGGA | AACTGCAACC | TCAGGTGCAA | GAAATTATCA | CCTGAGAACA |
| 2530 | 2540 | 2550 | 2560 | 2570 | 2580 |
| TCCAAAC'TGG | AACAACACTC | AACCCCTATCT | CGGTCTATTC | TTTTTGATTTA | TAAGGGATTT |
| AGGTTTGACC | TTGT'TGTGAG | TTGGGATAGA | GCCAGATAAG | AAAACTAAAT | ATTCCCTAAA |
| 2590 | 2600 | 2610 | 2620 | 2630 | 2640 |
| TGGGGATTTC | GGCCTATTGG | TTAAAAAATG | AGCTGATTTA | ACAAAAATTT | AACGCGAATT |
| ACCCCTAAAG | CCGGATAACC | AATTTTTTAC | TCGACTAAAT | TGTTTTTAA | TTGCGCTTAA |
| 2650 | 2660 | 2670 | 2680 | 2690 | 2700 |
| AATTCTGTGG | AATGTGTGTC | AGTTAGGGTG | TGGAAAGTCC | CCAGGCTCCC | CAGGCAGGCA |
| TTAAGACACC | TTACACACAG | TCAAT'CCCAC | ACCTTTCAGG | GGTCCGAGGG | GTCCGTCCGT |
| 2710 | 2720 | 2730 | 2740 | 2750 | 2760 |
| GAAGTATGCA | AAGCATGCAT | CTCAATTAGT | CAGCAACCAT | AGTCCCGCCC | CTAACTCCGC |
| CTTCATACGT | TTTCGTACGTA | GAGTTAATCA | GTCGTGGTA | TCAGGGCGGG | GATTGAGGCG |
| 2770 | 2780 | 2790 | 2800 | 2810 | 2820 |
| CCATCCCGCC | CCTAAC'TCCG | CCCAGTTCGG | CCCATTCCTCC | GCCCCATGGC | TGACTAATTT |
| GGTAGGGCGG | GGATTGAGGC | GGGTCAAGGC | GGGTAAGAGG | CGGGGTACCG | ACTGATTAAA |
| 2830 | 2840 | 2850 | 2860 | 2870 | 2880 |
| TTTTTTATTTA | TGCAGAGGCC | GAGGCCGCCCT | CGGCCCTCTGA | GCTATTCCAG | AAGTAGTGAG |
| AAAAATAAAT | ACGTCTCCGG | CTCCGGCGGA | GCCGGAGACT | CGATAAGGTC | TTTCATCACTC |
| 2890 | 2900 | 2910 | 2920 | 2930 | 2940 |
| GAGGCTTTTTT | TGGAGGCCCTA | GGCTTTTGCA | AAAAGCTTGG | ACAGCTCAGG | GCTGCGATTT |
| CTCCGAAAAA | ACCTCCGGAT | CCGAAAAACGT | TTTTTCGAACC | TGTCGAGTCC | CGACGCTAAA |
| 2950 | 2960 | 2970 | 2980 | 2990 | 3000 |
| CGCGCCAAAC | TTGACGGCAA | TCCTAGCGTG | AAGCTGGTA | GGATTTTATC | CCCGCTGCCA |
| GCGCGGT'TTG | AACTGCCGTT | AGGATCGCAC | TTCCGACCAT | CCTAAAAATAG | GGCGGACGGT |

FIGURE 19F

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 3010 | 3020 | 3030 | 3040 | 3050 | 3060 |
| TCATGGTTCC | ACCATTTGAC | TGCATCGTCG | CCGTGTCCCA | AAATATGGGG | ATTGGCAAGA |
| AGTACCAAGC | TGGTAACCTG | ACGTAGCAGC | GGCACAGGGT | TTTATACCCC | TAACCGTTCT |
| 3070 | 3080 | 3090 | 3100 | 3110 | 3120 |
| ACGGAGACCT | ACCCTGGCCT | CCGCTCAGGA | ACGAGTTCAA | GTACTTCCAA | AGAATGACCA |
| TGCCTCTGGA | TGGGACCGGA | GGCGAGTCCT | TGCTCAAGTT | CATGAAGGTT | TCTTACTGGT |
| 3130 | 3140 | 3150 | 3160 | 3170 | 3180 |
| CAACCTCTTC | AGTGGAAGGT | AAACAGAAATC | TGGTGATTAT | GGGTAGGAAA | ACCTGGTTCT |
| GTTGGAGAAG | TCACCTTCCA | TTTGCTCTTAG | ACCACTAATA | CCCATCCTTT | TGGACCAAGA |
| 3190 | 3200 | 3210 | 3220 | 3230 | 3240 |
| CCATTCCCTGA | GAAGAAATCGA | CCTTTAAAGG | ACAGAAATTA | TATAGTTCTC | AGTAGAGAAC |
| GGTAAGGACT | CTTCTTAGCT | GGAAATTTCC | TGCTTTAATT | ATATCAAGAG | TCATCTCTTG |
| 3250 | 3260 | 3270 | 3280 | 3290 | 3300 |
| TCAAAGAACC | ACCACGAGGA | GCTCATTTTC | TTGCCAAAAG | TTTGGATGAT | GCCTTAAGAC |
| AGTTTCTTGG | TGGTGCTCCT | CGAGTAAAAG | AACGGTTTTC | AAACCTACTA | CGGAATTTCTG |
| 3310 | 3320 | 3330 | 3340 | 3350 | 3360 |
| TTATTGAACA | ACCGGAATTG | GCAAGTAAAG | TAGACATGGT | TTGGATAGTC | GGAGGCAGTT |
| AATAAATTTGT | TGGCCCTTAA | CGTTTCAATTC | ATCTGTACCA | AACCTATCAG | CCTCCGTCAA |
| 3370 | 3380 | 3390 | 3400 | 3410 | 3420 |
| CTGTTTACCA | GGAAGCCATG | AATCAACCAG | GCCACCTTAG | ACTCTTTGTG | ACAAGGATCA |
| GACAAATGGT | CCTTCGGTAC | TTAGTTGGTC | CGGTGGAATC | TGAGAAAACAC | TGTTCCCTAGT |
| 3430 | 3440 | 3450 | 3460 | 3470 | 3480 |
| TGCAGGAATT | TGAAAGTGAC | ACGTTTCTCC | CAGAAATTGA | TTTGGGAAA | TATAAACTTC |
| ACGTCCTTAA | ACTTTCACCTG | TGCAAAAAGG | GTCTTTAACT | AAACCCCTTT | ATATTGAAG |
| 3490 | 3500 | 3510 | 3520 | 3530 | 3540 |
| TCCCAGAATA | CCCAGGCGTC | CTCTCTGAGG | TCCAGGAGGA | AAAAGGCATC | AAGTATAAGT |
| AGGGTCTTAT | GGGTCCGCAG | GAGAGACTCC | AGGTCCCTCCT | TTTTCCGTAG | TTCATATTCA |
| 3550 | 3560 | 3570 | 3580 | 3590 | 3600 |
| TTGAAGTCTA | CGAGAAGAAA | GACTAACAGG | AAGATGCTTT | CAAGTTCTCT | GCTCCCCCTCC |
| AACTTCAGAT | GCTCTTCTTT | CTGATTGTCC | TTCTACGAAA | GTTCAAGAGA | CGAGGGGAGG |

FIGURE 19G

pD17-hG1b

| | | | | | | | | | | | |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| 3610 | TAAAGCTATG | 3620 | CATTTTATATA | 3630 | AGACCATGGG | 3640 | ACTTTTGCTG | 3650 | GCTTTAGATC | 3660 | TCCTTTGTGAA |
| | ATTTTCGATAC | | GTAATAAATAT | | TCTGGTACCC | | TGAAAAACGAC | | CGAAATCTAG | | AGAAACACTT |
| 3670 | GGAAACCTTAC | 3680 | TTCTGTGGTG | 3690 | TGACATAAAT | 3700 | GGACAAACTA | 3710 | CCTACAGAGA | 3720 | TTTAAAGCTC |
| | CCTTGGAAATG | | AAGACACCCAC | | ACTGTATTAA | | CCTGTTTGAT | | GGATGTCTCT | | AAATTTTCGAG |
| 3730 | TAAGGTAAAT | 3740 | ATAAAATTTT | 3750 | TAAAGTGTATA | 3760 | ATGTGTTAAA | 3770 | CTACTGATTC | 3780 | TAATTTGTTG |
| | ATTCACATTA | | TATTTTAAAA | | ATTCACATAT | | TACACAAATTT | | GATGACTAAG | | ATTAACAAAC |
| 3790 | TGTAATTTTAG | 3800 | ATTCCAACCT | 3810 | ATGGAACCTGA | 3820 | TGAATGGGAG | 3830 | CAGTGGTGGA | 3840 | ATGCCCTTTAA |
| | ACATAAAATC | | TAAAGTTGGA | | TACCTTGACT | | ACTTACCCTC | | GTCACCACCT | | TACGGGAAAT |
| 3850 | TGAGGAAAAC | 3860 | CTGTTTGTCT | 3870 | CAGAAAGAAAT | 3880 | GCCATCTAGT | 3890 | GATGATGAGG | 3900 | CTACTGCTGA |
| | ACTCCTTTTG | | GACAAAACGA | | GTCTTCTTTA | | CGGTAGATCA | | CTACTACTCC | | GATGACGACT |
| 3910 | CTCTCAACAT | 3920 | TCTACTCCTC | 3930 | CAAAAAAGAA | 3940 | GAGAAAAGTA | 3950 | GAAGACCCCA | 3960 | AGGACTTTCC |
| | GAGAGTTGTA | | AGATGAGGAG | | GTTTTTCCTT | | CTCTTTCCAT | | CTTCTGGGGT | | TCCTGAAAAG |
| 3970 | TTCAGAATG | 3980 | CTAAGTTTCT | 3990 | TGAGTCATGC | 4000 | TGTGTTTAGT | 4010 | AATAGAACTC | 4020 | TTGCTTTGCTT |
| | AAGTCTTAAC | | GATTCAAAAA | | ACTCAGTACG | | ACACAAAATCA | | TTATCTTGAG | | AACGAACGAA |
| 4030 | TGCTATTTTAC | 4040 | ACCACAAAAG | 4050 | AAAAAGCTGC | 4060 | ACTGCTATAC | 4070 | AAGAAAAATA | 4080 | TGGAAAAATA |
| | ACGATAAATG | | TGGTGTTCCT | | TTTTTTCGACG | | TGACGATATG | | TTCTTTTAAAT | | ACCTTTTAT |
| 4090 | TTCTGTAAAC | 4100 | TTTATAAGTA | 4110 | GGCATAACAG | 4120 | TTATAATCAT | 4130 | AACATACTGT | 4140 | TTTTTCTTAC |
| | AAGACATTTG | | AAATATTTCAT | | CCGTATTGTC | | AATATTAGTA | | TTGTATGACA | | AAAAAGAATG |
| 4150 | TCCACACAGG | 4160 | CATAGAGTGT | 4170 | CTGCTATTAA | 4180 | TAACTATGCT | 4190 | CAAAAATGT | 4200 | GTACCTTTAG |
| | AGGTGTGTCC | | GTATCTCACA | | GACGATAAAT | | ATTGATACGA | | GTTTTTAACA | | CATGGAAATC |

FIGURE 19H

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 4210 | 4220 | 4230 | 4240 | 4250 | 4260 |
| CTTTTAAATT | TGTAAGGGG | TTAATAAGGA | ATATTTGATG | TATAGTGCCT | TGACTAGAGA |
| GAAAAATTA | ACAATTTCCC | AATATTCCT | TATAAACTAC | ATATCACGGA | ACTGATCTCT |
| 4270 | 4280 | 4290 | 4300 | 4310 | 4320 |
| TCATAATCAG | CCATACCACA | TTTGTAGAGG | TTTACTTGC | TTTAAAAAAC | CTCCACACACC |
| AGTATTAGTC | GGTATGGTGT | AAACATCTCC | AAAATGAACG | AAATTTTTTG | GAGGGTGTGG |
| 4330 | 4340 | 4350 | 4360 | 4370 | 4380 |
| TCCCCCTGAA | CCTGAACAT | AAAATGAATG | CAATTGTTGT | TGTTAACTTG | TTTATTGTCAG |
| AGGGGGACTT | GGACTTTGTA | TTTTACTTAC | GTTAAACAACA | ACAATTGAAC | AAATAACGTC |
| 4390 | 4400 | 4410 | 4420 | 4430 | 4440 |
| CTPATAATGG | TTACAAAATAA | AGCAATAGCA | TCACAAATTT | CACAAAATAAA | GCATTTTTTTT |
| GAATATTACC | AATGTTTATT | TCGTTATCGT | AGTGTTTAAA | GTGTTTATTT | CGTAAAAAAA |
| 4450 | 4460 | 4470 | 4480 | 4490 | 4500 |
| CACATGCATTC | TAGTTGTGGT | TTGTCCAAAC | TCATCAATGT | ATCTTATCAT | GTCTGGATCG |
| GTGACGTAAG | ATCAACACCA | AACAGGTTTG | AGTAGTTACA | TAGAATAGTA | CAGACCTAGC |
| 4510 | 4520 | 4530 | 4540 | 4550 | 4560 |
| GCTGGATGAT | CCTCCAGCGC | GGGGATCTCA | TGCTGGAGTT | CTTCGCCCCAC | CCCAACTTGT |
| CGACCTACTA | GGAGGTCGCG | CCCCTAGAGT | ACGACCTCAA | GAAGCGGGTG | GGGTTGAACA |
| 4570 | 4580 | 4590 | 4600 | 4610 | 4620 |
| TTATTGCAGC | TTATAATGGT | TACAAAATAAA | GCAATAGCAT | CACAAAATTTT | ACAAATAAAG |
| AATAACGTCG | AATATTACCA | ATGTTTATTT | CGTTATCGTA | GTGTTTAAAG | TGTTTATTTT |
| 4630 | 4640 | 4650 | 4660 | 4670 | 4680 |
| CATTTTTTTC | ACTGCATTCT | AGTTGTGGTT | TGTCCAAACT | CATCAATGTA | TCTTATCATG |
| GTAATAAAAAA | TGACGTAAGA | TCAACACCAA | ACAGGTTTGA | GTAGTTACAT | AGAATAGTAC |
| 4690 | 4700 | 4710 | 4720 | 4730 | 4740 |
| TCTGTATACC | GTCCGACCTCT | AGCTAGAGCT | TGGCGTAATC | ATGGTCATAG | CTGTTTCCCTG |
| AGACATATGG | CAGCTGGAGA | TCGATCTCGA | ACCGCATTAG | TACCAGTATC | GACAAAGGAC |
| 4750 | 4760 | 4770 | 4780 | 4790 | 4800 |
| TGTGAAATTG | TTATCCGCTC | ACAAATCCAC | ACAACATACG | AGCCGGAAGC | ATAAAGTGTA |
| ACACTTTAAC | AATAGGCGAG | TGTTAAGGTG | TGTTGTATGC | TCGGCCTTCG | TATTTACAT |

FIGURE 191

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 4810 | 4820 | 4830 | 4840 | 4850 | 4860 |
| AAGCCTGGGG | TGCCTAATGA | GTGAGCTAAC | TCACATTAAT | TGCGTTGCGC | TCACTGCCCCG |
| TTTCGGACCCC | ACGGATTACT | CACTCGATTG | AGTGTAATTA | ACGCAACGCG | AGTGACGGGC |
| 4870 | 4880 | 4890 | 4900 | 4910 | 4920 |
| CTTTCCAGTC | GGGAAACCTG | TCGTGCCAGC | TGCATTAATG | AATCGGCCAA | CGCGCGGGGA |
| GAAAGGTCAG | CCCTTTGGAC | AGCACGGTCG | ACGTAAATTAC | TTAGCCCGGT | GCGCGCCCCCT |
| 4930 | 4940 | 4950 | 4960 | 4970 | 4980 |
| GAGGCGGTTT | GCGTATTGGG | CGCTCTTCCG | CTTCCTCGCT | CAC TGACTCG | CTGCGCTCGG |
| CTCCGCCAAA | CGCATAACCC | CGGAGAAGGC | GAAGGAGCGA | GTGACTGAGC | GACGCGAGCC |
| 4990 | 5000 | 5010 | 5020 | 5030 | 5040 |
| TCGTTCCGGCT | GCGGCGAGCG | GTATCAGCTC | ACTCAAAGGC | GGTAATACGG | TTATCCACAG |
| AGCAAGCCGA | CGCCGCTCGC | CATAGTCGAG | TGAGTTTCCG | CCATTATGCC | AATAGGTGTC |
| 5050 | 5060 | 5070 | 5080 | 5090 | 5100 |
| AATCAGGGGA | TAACGCAGGA | AAGAACATGT | GAGCAAAAGG | CCAGCAAAAG | GCCAGGAACC |
| TTAGTCCCCCT | ATTGCGTCCT | TTCTTGTAACA | CTCGTTTTC | GGTCGTTTC | CGGTCCCTGG |
| 5110 | 5120 | 5130 | 5140 | 5150 | 5160 |
| GTAAAAGGC | CGCGTTGCTG | GCGTTTTC | ATAGGCTCCG | CCCCCCTGAC | GAGCATCACA |
| CATTTTCCG | GCGCAACGAC | CGCAAAAGG | TATCCGAGGC | GGGGGGACTG | CTCGTAGTGT |
| 5170 | 5180 | 5190 | 5200 | 5210 | 5220 |
| AAAAATCGACG | CTCAAAGTCAG | AGGTGGCGAA | ACCCGACAGG | ACTATAAAGA | TACCAAGGCGT |
| TTT TAGCTGC | GAGTTCAGTC | TCCACCGCTT | TGGGCTGTCC | TGATATTTC | ATGGTCCGCA |
| 5230 | 5240 | 5250 | 5260 | 5270 | 5280 |
| TTCCCCCTGG | AAGCTCCCTC | GTGCGCTCTC | CTGTTCGAC | CCTGCCGCTT | ACCGGATACC |
| AAGGGGGACC | TTTCGAGGGAG | CACGCGAGAG | GACAAGGCTG | GGACGGCGAA | TGGCCTATGG |
| 5290 | 5300 | 5310 | 5320 | 5330 | 5340 |
| TGTCCGCCCTT | TCCTCCCTTCG | GGAAGCGTGG | CGCTTCTCA | ATGCTCACGC | TGTAGGTATC |
| ACAGGCGGAA | AGAGGGAAGC | CCCTCGCACC | GCGAAAGAGT | TACGAGTGG | ACATCCATAG |
| 5350 | 5360 | 5370 | 5380 | 5390 | 5400 |
| TCAGTTCGGT | GTAGGTCGTT | CGCTCCAAGC | TGGGCTGTGT | GCACGAACCC | CCCGTTACAGC |
| AGTCAAGCCA | CATCCAGCAA | GCGAGGTTTCG | ACCCGACACA | CGTGCTTGGG | GGGCAAGTCG |

FIGURE 19J

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|---------------|
| 5410 | 5420 | 5430 | 5440 | 5450 | 5460 |
| CCGACCGCTG | CGCCTTATCC | GGTAACATATC | GTCTTGAGTC | CAACCCGGTA | AGACACGACT |
| GGCTGGCGAC | GCGGAATAGG | CCATTGATAG | CAGAACTCAG | GTTGGGCCAT | TCTGTGCTGA |
| 5470 | 5480 | 5490 | 5500 | 5510 | 5520 |
| TATCGCCACT | GGCAGCAGCC | ACTGGTAACA | GGATTAGCAG | AGCGAGGTAT | GTAGGCGGTG |
| ATAGCGGTGA | CCGTCGTCGG | TGACCATGTG | CCTAATCGTC | TCGCTCCATA | CATCCGCCAC |
| 5530 | 5540 | 5550 | 5560 | 5570 | 5580 |
| CTACAGAGTT | CTTGAAGTGG | TGGCCTAACT | ACGGCTACAC | TAGAAAGACA | GTATTTTGGTA |
| GATGTCCTCA | GAACCTTCAC | ACCGGATTGA | TGCCGATGTG | ATCTTCCCTGT | CATAAAACCAT |
| 5590 | 5600 | 5610 | 5620 | 5630 | 5640 |
| TCCTGCGCTCT | GCTGAAGCCA | GTTACCTTCG | GAAAAAGAGT | TGGTAGCTCT | TGATCCGGCA |
| AGACGCGAGA | CGACTTCGGT | CAATGGAAGC | CTTTTCTCTCA | ACCATCGAGA | ACTAGGCCGT |
| 5650 | 5660 | 5670 | 5680 | 5690 | 5700 |
| AACAAACCAC | CGCTGGTAGC | GGTGGTTTTT | TTGTTTGCAA | GCAGCAGATT | ACGCGCAGAA |
| TTGTTTGGTG | GCGACCATCG | CCACCACAAA | AACAAACGTT | CGTCGTCTAA | TGCGCGTCTT |
| 5710 | 5720 | 5730 | 5740 | 5750 | 5760 |
| AAAAAGGATC | TCAAGAAAGT | CCTTTGATCT | TTTCTACGGG | GTCTGACGCT | CAGTGGAAACG |
| TTTTTCCCTAG | AGTTCTTCTA | GGAAACTAGA | AAAGATGCCC | CAGACTGCCA | GTACACCTTGC |
| 5770 | 5780 | 5790 | 5800 | 5810 | 5820 |
| AAACTCAGC | TTAAGGGATT | TTGGTCATGA | GATTATCAAA | AAGGATCTTC | ACCTAGATCC |
| TTTTTGAGTGC | AATTCCCTAA | AACCAGTACT | CTAATAGTTT | TTCCCTAGAAG | TGGATCTAGG |
| 5830 | 5840 | 5850 | 5860 | 5870 | 5880 |
| TTTTTAAATTA | AAAATGAAGT | TTTAAATCAA | TCATAAGTAT | ATATGAGTAA | ACTTGGTCTG |
| AAAATTTAAT | TTTTTACTTCA | AAATTTAGTT | AGATTTTCATA | TATACTCATT | TGAACCCAGAC |
| 5890 | 5900 | 5910 | 5920 | 5930 | 5940 |
| ACAGTTACCA | ATGCTTAATC | AGTGAGGCAC | CTATCTCAGC | GATCTGTCTA | TTTCTGTTTCAAT |
| TGTCATATGGT | TACGAATTAG | TCACTCCGTG | GATAGAGTCG | CTAGACAGAT | AAAGCAAGTA |
| 5950 | 5960 | 5970 | 5980 | 5990 | 6000 |
| CCATAGTTGC | CTGACTCCCC | GTCGTGTAGA | TAACTACGAT | ACGGAGGGC | TTACCATCTG |
| GGTATCAACG | GACTGAGGGG | CAGCACATCT | ATTGATGCTA | TGCCCTCCCG | AATGGTAGAC |

FIGURE 19K

pD17-hG1b

| | | | | | |
|-------------|------------|-------------|-------------|-------------|-------------|
| 6010 | 6020 | 6030 | 6040 | 6050 | 6060 |
| GCCCCAGTGC | TGCAATGATA | CCGCGAGACC | CACGCTCACC | GGCTCCAGAT | TTATCAGCAA |
| CGGGGTACAG | ACGTTACTAT | GGCGCTCTGG | GTGCGAGTGG | CCGAGGTCTA | AATAGTCGTT |
| 6070 | 6080 | 6090 | 6100 | 6110 | 6120 |
| TAAACCAAGC | AGCCGGAAGG | GCCGAGCGCA | GAAGTGGTCC | TGCAACTTTA | TCCGCCCTCCA |
| AATTGGTCCG | TCGGCCTTCC | CGGCTCGCGT | CTTCACCAAG | ACGTTGAAAT | AGGCGGAGGT |
| 6130 | 6140 | 6150 | 6160 | 6170 | 6180 |
| TCCAGTCTAT | TAATTGTTGC | CGGGAAGCTA | GAGTAAGTAG | TTCCGCCAGTT | AATAGTTTGC |
| AGGTCAGATA | ATTAAACAAC | GCCCTTCGAT | CTCATTCATC | AAGCGGTCAA | TTATCAAAACG |
| 6190 | 6200 | 6210 | 6220 | 6230 | 6240 |
| GCAACGTTGT | TGCCATTGCT | ACAGGCATCG | TGGTGTCACG | CTCGTCGTTT | GGTATGGCTT |
| CGTTGCAACA | ACGGTAACGA | TGTCCGTAGC | ACCACAGTGC | GAGCAGCAAA | CCATACCCGAA |
| 6250 | 6260 | 6270 | 6280 | 6290 | 6300 |
| CATTCAGCTC | CGGTTCCCAA | CGATCAAGGC | GAGTTACATG | ATCCCCCATG | TTGTGCAAAA |
| GTAAGTCGAG | GCCAAAGGTT | GCTAGTTCCG | CTCAATGTAC | TAGGGGGTAC | AACACGTTTT |
| 6310 | 6320 | 6330 | 6340 | 6350 | 6360 |
| AAGCGGTTAG | CTCCTTCGGT | CCTCCGATCG | TTGTCAGAAG | TAAAGTTGGCC | GCAGTGTAT |
| TTCCGCCAATC | GAGGAAGCCA | GGAGGCTAGC | AACAGTCTTC | ATTCAACCCG | CGTCACAATA |
| 6370 | 6380 | 6390 | 6400 | 6410 | 6420 |
| CACATCATGGT | TATGGCAGCA | CTGCATAAAT | CTCTTACTGT | CATGCCATCC | GTAAGATGCT |
| GTGAGTACCA | ATACCGTTCG | GACGTATTAA | GAGAAATGACA | GTACGGTAGG | CATTCTACGA |
| 6430 | 6440 | 6450 | 6460 | 6470 | 6480 |
| TTTCTGTGAC | TGGTGAGTAC | TCAACCAAGT | CATTCTGAGA | ATAGTGTATG | CGGCGACCGA |
| AAAGACACTG | ACCACTCATG | AGTTGGTTCA | GTAAGACTCT | TATCACATAC | GCCGCTGGCT |
| 6490 | 6500 | 6510 | 6520 | 6530 | 6540 |
| GTTGCTCTTG | CCCGGCGTCA | ATACGGGATA | ATACCGCGCC | ACATAGCAGA | ACTTTAAAG |
| CAACGAGAAC | GGCGCCGAGT | TATGCCCTAT | TATGGCGCGG | TGTATCGTCT | TGAAATTTTC |
| 6550 | 6560 | 6570 | 6580 | 6590 | 6600 |
| TGCTCATCAT | TGGAAAAAGT | TCTTCGGGGC | GAAAACTCTC | AAGGATCTTA | CCGCTGTTGA |
| ACGAGTAGTA | ACCTTTTGCA | AGAAAGCCCCG | CTTTTGAGAG | TTCTCTAGAAT | GCGCACAACT |

FIGURE 19L

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|-------------|-------------|
| 6610 | 6620 | 6630 | 6640 | 6650 | 6660 |
| GATCCAGTTC | GATGTAACCC | ACTCGTGAC | CCAACTGATC | TTCAGCATCT | TTTACTTTCA |
| CTAGGTCAAG | CTACATTGGG | TGAGCACGTG | GGTTGACTAG | AAGTCGTAGA | AAATGAAAGT |
| 6670 | 6680 | 6690 | 6700 | 6710 | 6720 |
| CCAGCGTTTC | TGGGTGAGCA | AAAACAGGAA | GGCAAAATGC | CGCAAAAAG | GGAAATAAGG |
| GGTCGCAAG | ACCCACTCGT | TTTGTGCTT | CCGTTTTACG | GCGTTTTC | CCTTATTCCC |
| 6730 | 6740 | 6750 | 6760 | 6770 | 6780 |
| CGACACGGAA | ATGTTGAATA | CTCATACTCT | TCCTTTTCA | ATATTATTGA | AGCATTTATC |
| GCTGTGCCCTT | TACAACTTAT | GAGTATGAGA | AGGAAAAAGT | TATAATAACT | TCGTAAATAG |
| 6790 | 6800 | 6810 | 6820 | 6830 | 6840 |
| AGGGTTATTG | TCTCATGAGC | GGATACATAT | TTGAATGTAT | TTAGAAAAAT | AAACAAATAG |
| TCCCAATAAC | AGAGTACTCG | CCTATGTATA | AACTTACATA | AATCTTTTA | TTTGTTTATC |
| 6850 | 6860 | 6870 | 6880 | 6890 | 6900 |
| GGGTCCCGCG | CACATTTC | CGAAAAGTGC | CACCTGACGT | CGACGGATCG | GGAGATCTGC |
| CCCAAGGCGC | GTGTAAGGG | GCTTTTCACG | GTGGACTGCA | GCTGCCCTAGC | CCTCTAGACG |
| 6910 | 6920 | 6930 | 6940 | 6950 | 6960 |
| TAGGTGACCT | GAGGCGCGCC | GGCTTCGAAAT | AGCCAGAGTA | ACCTTTTTT | TTAATTTTAT |
| ATCCACTGGA | CTCCGCGCGG | CCGAAGCTTA | TCCGGTCTCAT | TGGAAAAAA | AATTAAAAATA |
| 6970 | 6980 | 6990 | 7000 | 7010 | 7020 |
| TTTATTTTAT | TTTTTGAGATG | GAGTTTGGCG | CCGATCTCCC | GATCCCCCTAT | GGTCGACTCT |
| AAATAAAATA | AAAACCTCTAC | CTCAAAACCGC | GGCTAGAGGG | CTAGGGGATA | CCAGCTGAGA |
| 7030 | 7040 | 7050 | 7060 | 7070 | 7080 |
| CAGTACAATC | TGCTCTGATG | CCGCATAGTT | AAGCCAGTAT | CTGCTCCCTG | CCTTGTTGTT |
| GTCAATGTTAG | ACGAGACTAC | GGCGTATCAA | TTCCGGTCATA | GACGAGGGAC | GAACACACAA |
| 7090 | 7100 | 7110 | 7120 | 7130 | 7140 |
| GGAGGTCGCT | GAGTAGTGCG | CGAGCAAAAT | TTAAGCTACA | ACAAGGCAAG | GCTTGACCGA |
| CCTCCAGCGA | CTCATCACGC | GCTCGTTTAA | AATTCGATGT | TGTTCCGTTT | CCTTCCGTTT |
| 7150 | 7160 | 7170 | 7180 | 7190 | 7200 |
| CAATTGCATG | AAGAACTCTGC | TTAGGGTTAG | GCGTTTTCG | CTGCTTCGCG | ATGTACGGGC |
| GTTAACGTAC | TTCCTTAGACG | AATCCCAATC | CGCAAAACGC | GACGAAGCGC | TACATGCCCG |

FIGURE 19M

pD17-hG1b

| | | | | | |
|-------------|-------------|-------------|-------------|------------|-------------|
| 7210 | 7220 | 7230 | 7240 | 7250 | 7260 |
| CAGATATACG | CGTTGACATT | GATTATTGAC | TAGTTATTAA | TAGTAATCAA | TTACGGGGTC |
| GTCTATATGC | GCAACTGTAA | CTAATAACTG | ATCAATAATT | ATCATTAGTT | AATGCCCCAG |
| 7270 | 7280 | 7290 | 7300 | 7310 | 7320 |
| ATTAGTTTCAT | AGCCCATATA | TGGAGTTCCG | CGTTACATAA | CTTACGGTAA | ATGGCCCCGCC |
| TAATCAAAGTA | TCGGGTATAT | ACCTCAAGGC | GCAATGTATT | GAATGCCATT | TACCGGGCGG |
| 7330 | 7340 | 7350 | 7360 | 7370 | 7380 |
| TGGCTGACCG | CCCAACGACC | CCCGCCCATT | GACGTCAATA | ATGACGTATG | TTCCCATAGT |
| ACCGACTGGC | GGGTGCTGG | GGCGGGGTAA | CTGCAGTTAT | TACTGCATAC | AAGGGTATCA |
| 7390 | 7400 | 7410 | 7420 | 7430 | 7440 |
| AACGCCAATA | GGGACTTTCC | ATTGACGTCA | ATGGGTGGAC | TATTTACGGT | AAACTGCCCA |
| TTGCGGTTAT | CCCTGAAAGG | TAACTGCAGT | TACCCACCTG | ATAAATGCCA | TTTGACGGGT |
| 7450 | 7460 | 7470 | 7480 | 7490 | 7500 |
| CTTGGCAGTA | CATCAAGTGT | ATCATATGCC | AAGTACGCCC | CCTATTGACG | TCAATGACGG |
| GAACCGTCAT | GTAGTTCACA | TAGTATACGG | TTCATGCGGG | GGATAACTGC | AGTTACTGCC |
| 7510 | 7520 | 7530 | 7540 | 7550 | 7560 |
| TAAATGGCCC | GCCTGGCATT | ATGCCCCAGTA | CATGACCCTTA | TGGGACTTTC | CTACTTGGCA |
| ATTTACCGGG | CGGACCGTAA | TACGGGTCAAT | GTACTGGAAT | ACCCTGAAAG | GATGAACCGT |
| 7570 | 7580 | 7590 | 7600 | 7610 | 7620 |
| GTACATCTAC | GTATTAGTCA | TCGCTATTAC | CATGGTGATG | CGGTTTGGC | AGTACATCAA |
| CATGTAGATG | CATAATCAGT | AGCGATAAATG | GTACCCACTAC | GCCAAAACCG | TCATGTAGTT |
| 7630 | 7640 | 7650 | 7660 | 7670 | 7680 |
| TGGGCGTGGA | TAGCGGTTTG | ACTCACGGGG | ATTTCCAAGT | CTCCACCCCA | TTGACGTCAA |
| ACCCGCACCT | ATCGCCAAAC | TGAGTGCCCC | TAAAGGTTCA | GAGGTGGGGT | AACTGCAGTT |
| 7690 | 7700 | 7710 | 7720 | 7730 | 7740 |
| TGGGAGTTTG | TTTGTGCACC | AAAATCAACG | GGACTTTCCA | AAATGTCGTA | ACAACTCCGC |
| ACCCTCAAAC | AAAACCGTGG | TTTTAGTTGC | CCTGAAAGGT | TTTACAGCAT | TGTTGAGGCG |
| 7750 | 7760 | 7770 | 7780 | 7790 | 7800 |
| CCCATTGACG | CAAATGGGCG | GTAGGCGTGT | ACGGTGGGAG | GTCTATATAA | GCAGAGCTCT |
| GGGTAACCTG | GTATTACCCGC | CATCCGCACA | TGCCACCCCTC | CAGATATATT | CGTCTCGAGA |

FIGURE 19N

pD17-hG1b

| | | | | | |
|------------|------------|------------|------------|-------------|------------|
| 7810 | 7820 | 7830 | 7840 | 7850 | 7860 |
| CTGGCTAACT | AGAGAACCCA | CTGCTTACTG | GCTTATCGAA | ATTAATACGA | CTCACTATAG |
| GACCGATTGA | TCTCTTGGGT | GACGAATGAC | CGAATAGCTT | TAAATTATGCT | GAGTGATATC |
| 7870 | 7880 | | | | |
| GGAGACCCAA | GCTT | | | | |
| CCTCTGGGTT | CGAA | | | | |

FIGURE 20

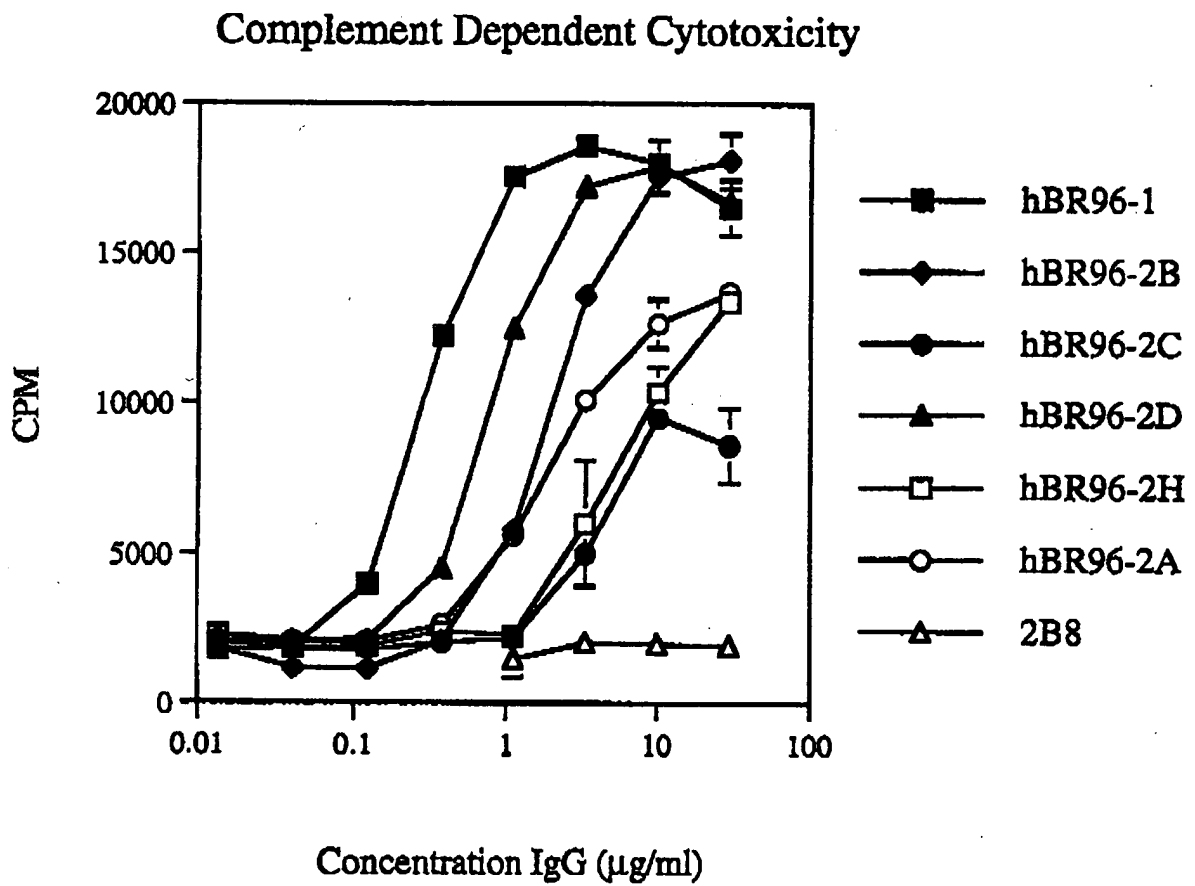


FIGURE 21

Antibody Dependent Cell-Mediated Cytotoxicity

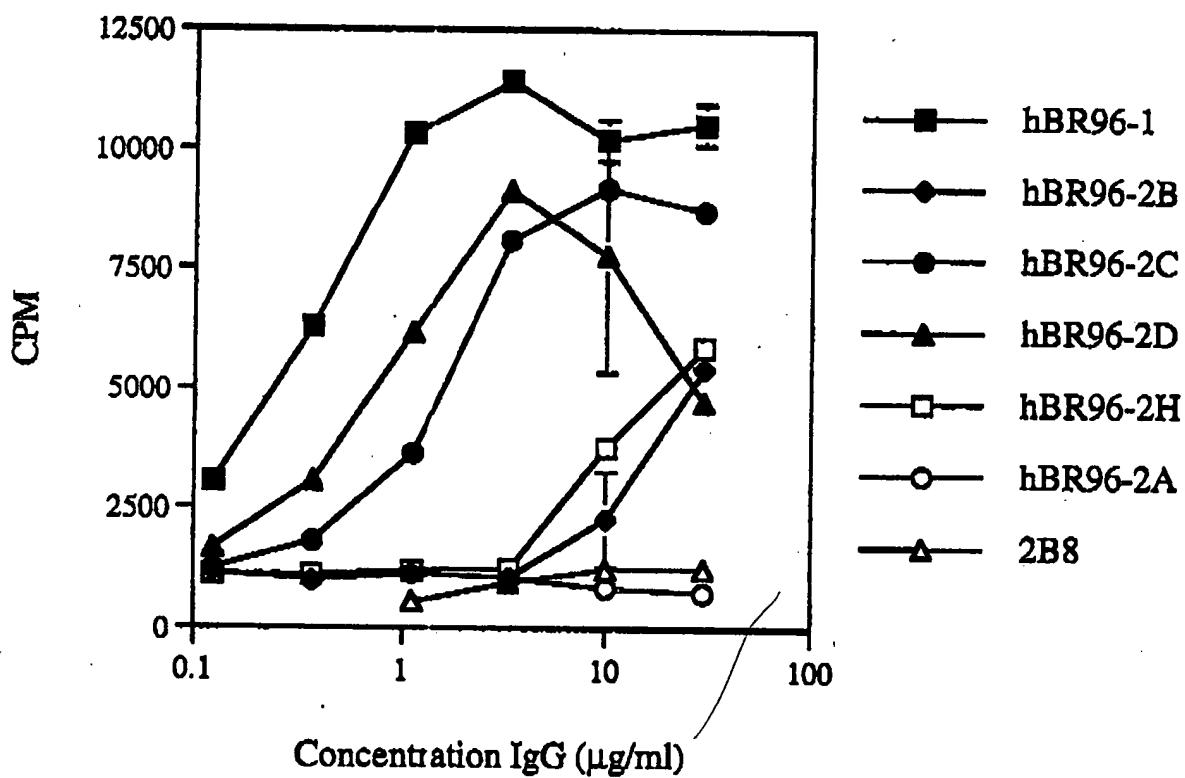


FIGURE 22

Binding activity of hBR96-2 constant region mutants on LeY-HSA

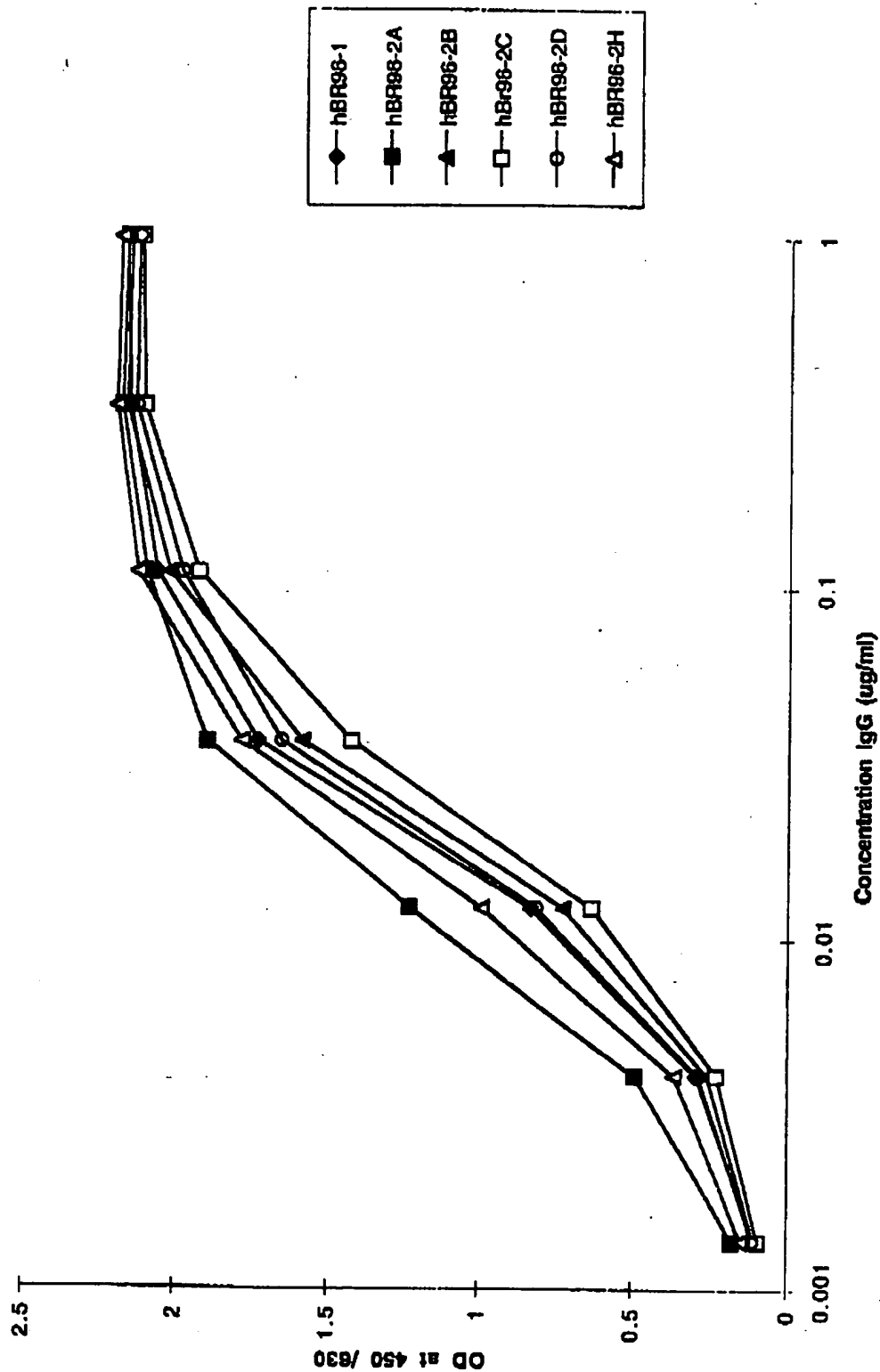


FIGURE 23

Binding activity of hBR96-2 constant region mutants on LNFPII-BSA

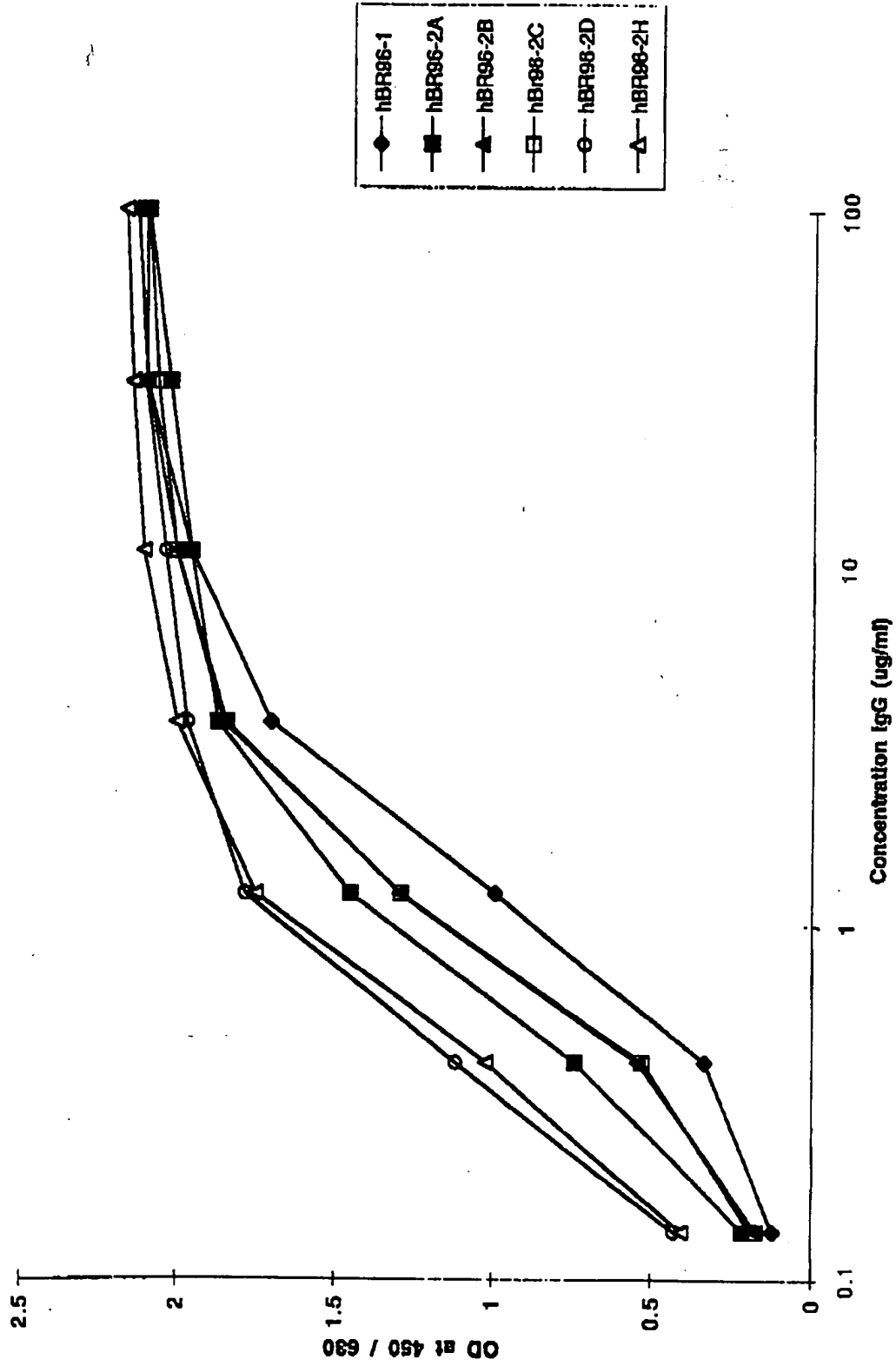


Figure 24

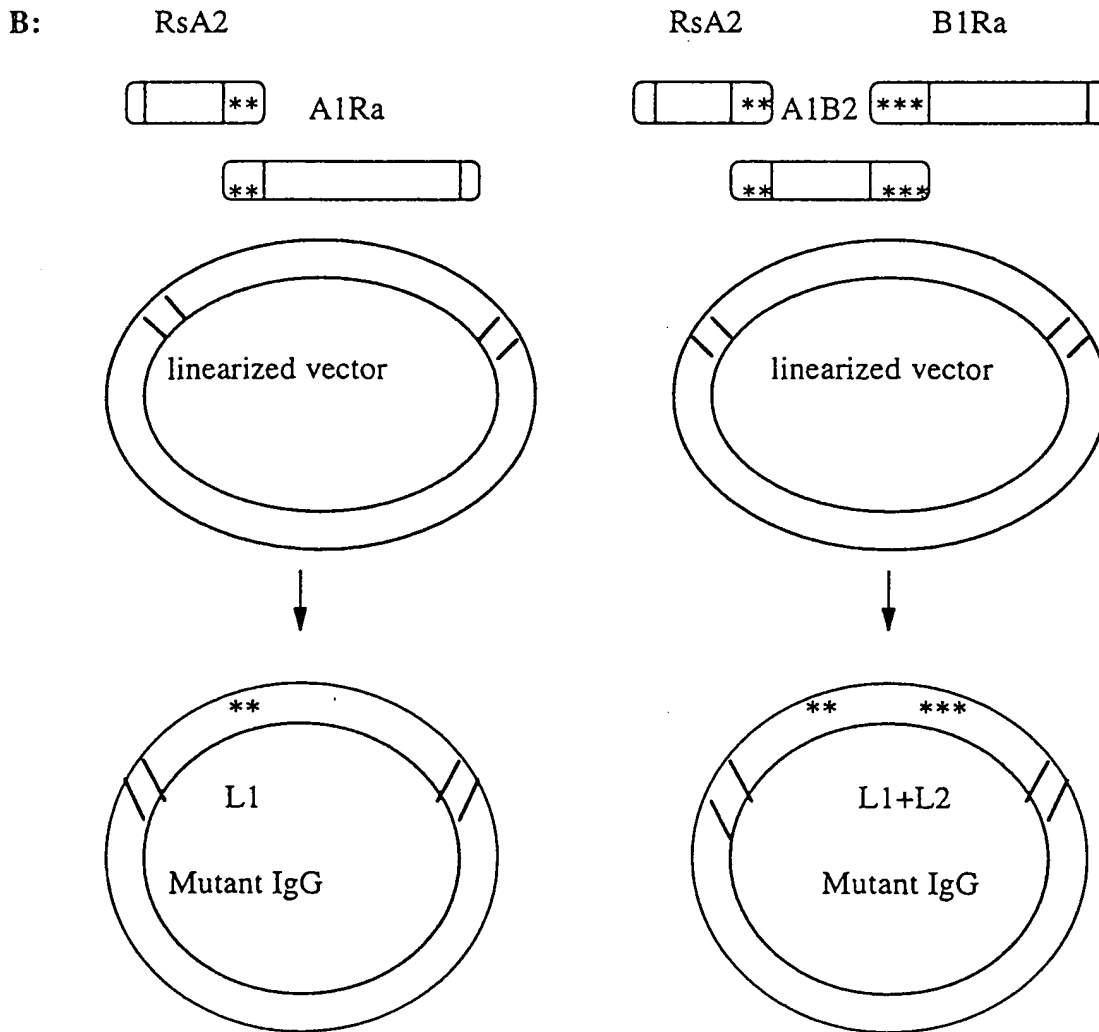
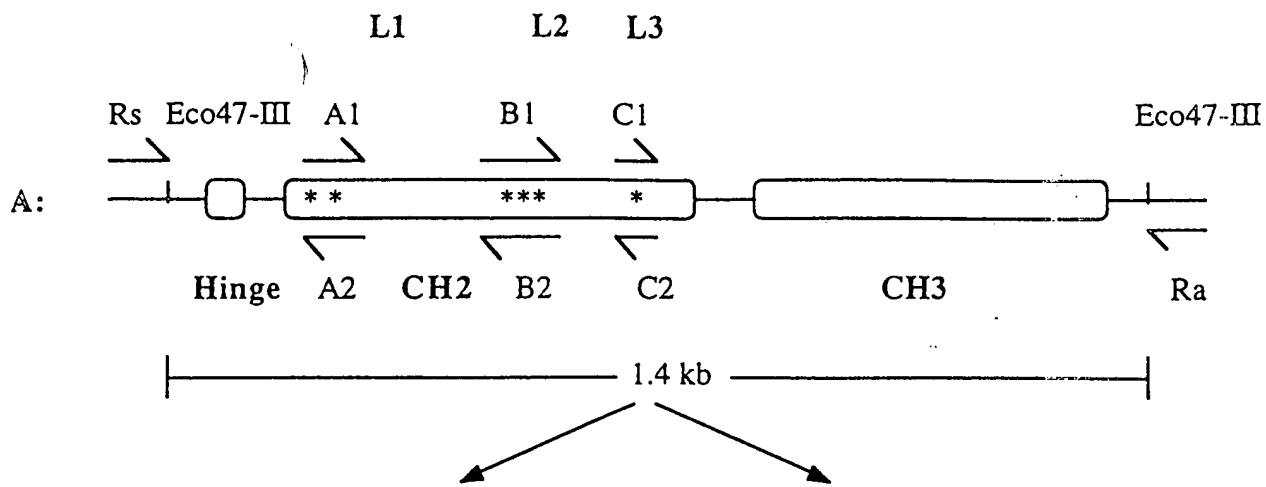
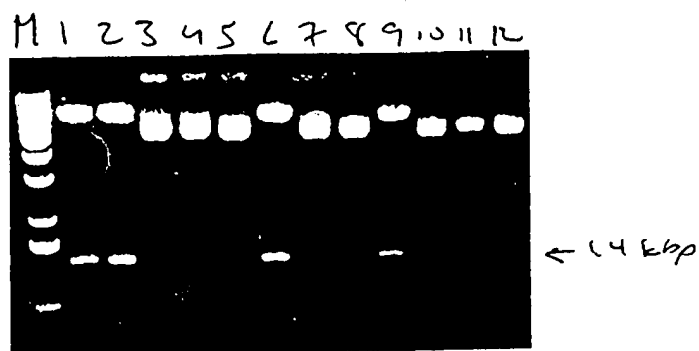


Figure 25



08905293.080197
16T080.E6250580

Figure 26

hBR96-2 Heavy Chain Variable Region (VH)

1 11 21 31 41
 EVQLVESGGG LVQPGGSLRL SCAASGFPFS DYMYWVRQA PGKGLEWVSY
 51 61 71 81 91
 ISQDGDITDY ADSVKGRFTI SRDNAKNSLY LQMNSLRDED TAVYYCARGL
 101 111
 ADGAWFAYWG QGTLVTVSS

human IgG1 constant

CH1
 A STKGPSVFPL APSSKSTSGG TAALGCLVKD
 YFPEPVTVSW NSGALTSGVH TFPVQLQSSG LYSLSSTVTV PSSSLGTQTY
 ICNVNHNKPSN TKVDKKVEPK SCDKTHTCPP CH2 225 237
 DTLNISRTPE VTCVVVDVSH EDPEVKFNWY VDGVEVHNAK TKPREEQYNS
 TYRVSVELTV LHQDWLNGKE 318 320 322 YKQVSNKAL PAPLEKTISK AKGQPREPQV
 YTLPPSRDEL TKNQVSLTCL VKGFYPSDIA VEWESNGQPE NNYKTTTPVL
 DSDGSFFLYS KLTVDKSRWQ QGNVFSCSVM HEALHNHYTQ KSLSLSPGK

08905293-080197

Figure 27

hBR96-2A: Heavy Chain Variable Region (V_H)

1 11 21 31 41
EVQLVESGGG LVQPGGSLRL SCAASGFPFS DYMYWVRQA PGKGLEWVS
51 61 71 81 91
ISQDGDITDY ADSVKGRFTI SRDNAKNSLY LQMNSLRDED TAVYYCARGL
101 111
ADGAWFAYWG QGTLVTVSS

hBR96-2A: Human Heavy Chain IgG1 Constant Region Δ CH2

A STKGPSVFPL APSSKSTSCG TAALGCLVKD YFPEPVTVSW NSGALTSGVH
TFPAVLQSSG LYSLSVVTV PSSSLGTQTY ICNVNHKPSN TKVDKKVEPK
SCDKTHTCPP CP GQPREPQV YTLPPSRDEL TKNQVSLTCL VKGFYPSDIA
VEWESNGQPE NNYKTTTPVL DSDGSFFLYS KLTVDKSRWQ QGNVFSCSVM
HEALHNHYTQ KSLSLSPGK

26T080- E6250680

Figure 28

This sequence is the chi BR96 IgG1 with CH2 deleted.

VH
1 EVNLVESGGG LVQPGGSLKV SCVTSGFTFS DYMYWVRQT PEKRLEWVAY
51 ISQGGDITDY PDTVKGRFTI SRDNAKNTLY LQMSRLKSED TAMYVCARGL
101 DDGAWFAYWG QGTLVTVSVA STRGPSVFPL APSSKSTSGG TAALGCLVKD
151 YFPEPVTVSW NSGALTSGVH TFPVQLQSSG LYSLSVVTV PSSSLGTQTY
201 ICNVNHNKPSN TKVDKKVEPK SCDKTHTCPP CH³QPREPQV YTLPPSRDEL
251 TKNQVSLTCL VKGFYPSDIA VEWESNGQPE NNYKTTPPVL DSDGSFFLYS
301 KLTVDKSRWQ QGNVFSCSVM HEALHNHYTQ KSLSLSPGK

26 F080" E6250680